




**Eno River  
State Park**



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# ENO RIVER STATE PARK MASTER PLAN

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**Prepared By:**

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Department of Natural Resources  
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P.O. Box 27687  
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## FOREWORD

The Eno River is the setting for a unique North Carolina State Park. It is the only park established along a river corridor; consequently, its character is linear rather than centralized around a particular physical feature, as in other parks. In addition, the river is vulnerable to the pressures of urban development because of its proximity to the I-85/U.S. 70 transportation corridor and the expansion of Durham and Hillsborough. Therefore, the master plan study responds to different objectives and criteria from those normally used in evaluating future development of State Parks. Public access and protection of the resource are especially important in this study, and different approaches to these problems have been used. However, fulfillment of the purposes and spirit of the State Park System is the foremost objective of any planning effort.

The ultimate purpose of a master plan is to set forth a plan and program for park development. Balance of recreational and natural elements is a key goal, and is dependent on the ability to

design for the carrying capacity of the land and long-term requirements for resource protection. The Eno River State Park master plan proposes development in phases so that capital improvements in the park and land acquisition are logical and practical according to priorities and analysis of environmental impacts. Reevaluation of the plan will occur annually, with a more detailed updating of the plan every five years. Actual timing of development is contingent on the availability of funds and the establishment of statewide priorities.

During the course of this master plan study, a number of groups and individuals were helpful in the collection of information and in providing input to the development of planning criteria. In particular, the officers and members of the Eno River Association provided considerable time and effort. The Division of Parks and Recreation wishes to express its appreciation to all those who participated in the planning effort.

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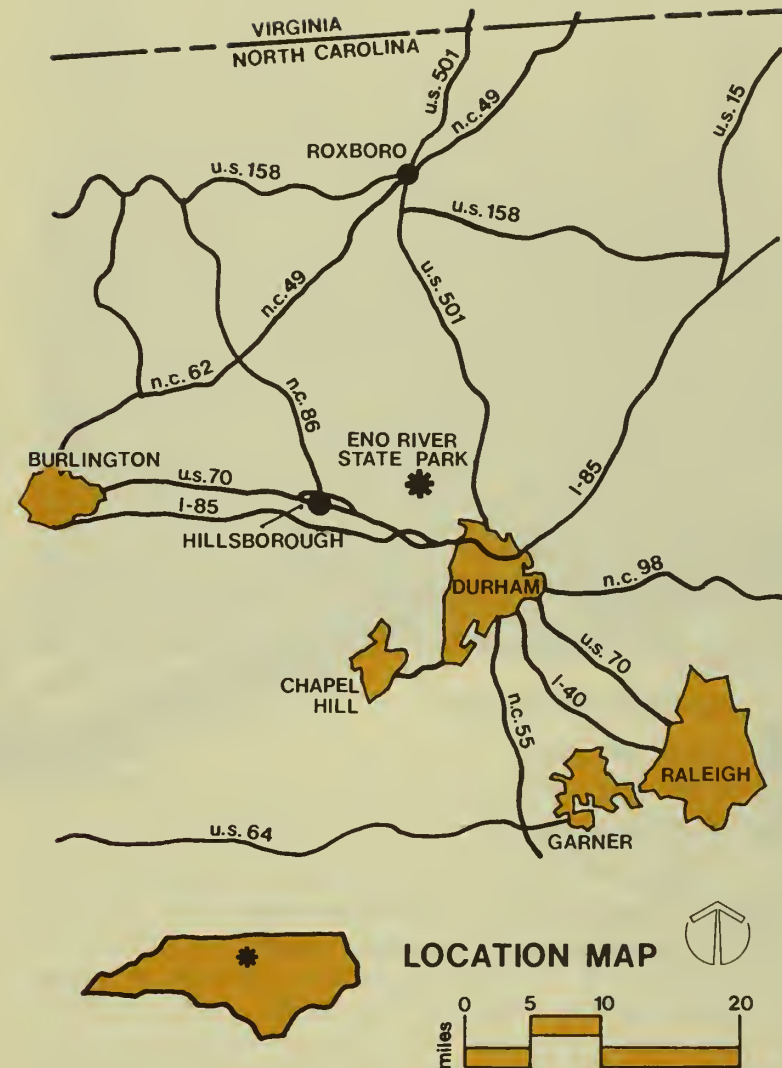


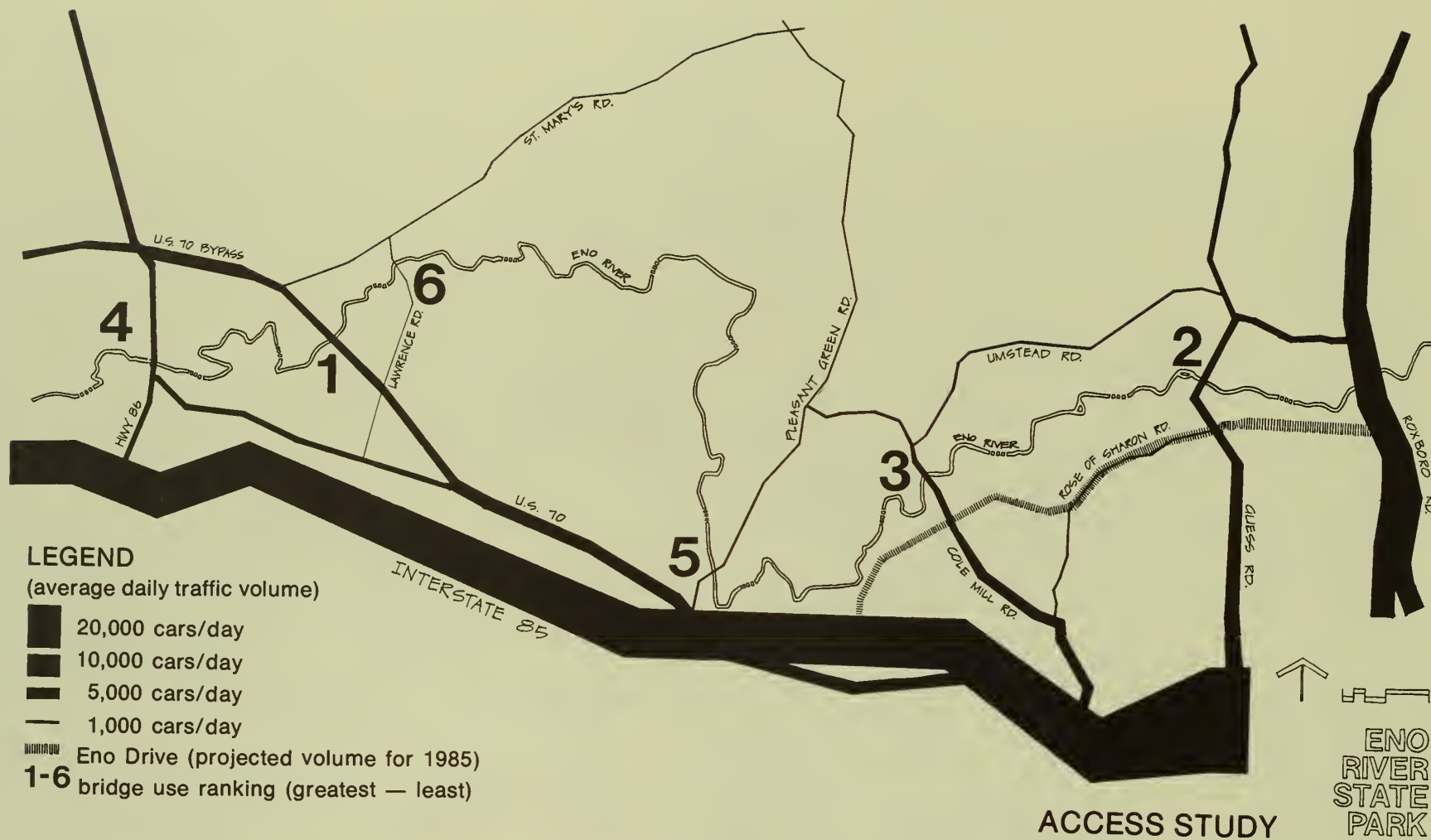
### LOCATION, ACCESS AND POPULATION

The Eno River State Park is located in a densely populated region of North Carolina, having a total regional population of more than 1,300,000 persons. Durham, Raleigh, Burlington, Greensboro, and Danville, Virginia are within an eighty kilometer (fifty-mile) radius of the Park. Within that radius, Wake County has the largest number of potential park users followed by Durham and Guilford Counties.

The park area is regionally accessible from several interstates, highways and primary roads. Interstate 85, running east from Greensboro, passes between the Eno River and the City of Durham before turning north-east toward Virginia. U.S. 15-501 runs in a north-south direction through Durham and Chapel Hill, crossing the Eno River east of the State Park. From the east, U.S. 64 and U.S. 70 converge on Raleigh. From Raleigh to Durham, traffic is carried on Interstate 40 and U.S. 70.

Six roads cross the Eno River within the area studied for the State Park, all easily accessible from either I-85 or U.S. 70. The U.S. 70 Bypass serves the Town of Hillsborough and is the most heavily used road crossing the Eno River, carrying about 3,800 cars per day. Guess Road and Cole Mill Road which cross the eastern portion of the river serve as main suburban connectors to Durham, and are the second and third most heavily used roads. N.C. 86 passes through the Town of Hillsborough and connects I-85, U.S. 70, and the U.S. 70 Bypass; its average daily traffic volume is about 2500 cars. Between the U.S. 70 Bypass and Cole Mill Road river crossings, two other roads cross the river — Lawrence and Pleasant Green. Both are used by less than 1,000 cars per day at the bridges, and serve primarily rural traffic.







## HISTORY

Prior to the white settlers, the area around the Eno River was occupied by a substantial Indian civilization. During the seventeenth and eighteenth centuries, a Siouan Indian tribe named the Eno lived along the river banks. Also living in the area was the Shocco tribe; they shared many of the Eno's habits, which allowed the two tribes to carry on a long association. The Eno and Shocco tribes merged into one nation at the end of the seventeenth century and settled near the present location of Durham in the village of Adshusheer.

Early explorers, including the surveyor John Lawson, frequently passed through the area along the Great Indian Trading Path. In 1701, Lawson spent a short time at the Adshusheer Village in the company of the chief of the Eno nation, Enoe Will. As a result of his travels, Lawson has provided one of the most detailed descriptions of the Indian civilization in early America.

With the advent of the white man, the Indian nations weakened and dispersed, some moving north into New York and others south to join the strong Catawba tribe. White settlers from Virginia, Pennsylvania, and other northern states moved into the Eno River area utilizing the paths and fields previously established by the Indians. As a result, the Eno River has been an important part of commerce for the white man since the 1750's and even before.

The oldest mill site in the Durham Area is Synnott's Mill located about a mile downstream from Guess Road on the Eno River. Michael Synnott was not only a miller by trade but also the proprietor of an Inn. A number of other mills were constructed along the river, the most outstanding of which is the John Cabe Mill built in 1779 between the present bridges of Pleasant Green Road and Cole Mill Road. In addition, William Few's Mill (c. 1758), Holden Mill (c. 1820), Berry Public Mill (c. 1850), and Berry Private Mill (c. 1854), among others, are located within a single 13 kilometer (8 mile +) stretch of the river.

Comparatively speaking, the area developed into both an affluent and influential community — the center of North



PIPER-DIXON HOUSE, *Jerome C. Friar*

Carolina's early political history. The Town of Hillsborough, the State Capitol during this early period, has been an important part of the Eno's history since its founding in 1754. No fewer than eighty late eighteenth and nineteenth century structures, twelve of which have been listed on the National Register of Historic Places, remain standing in the Town. Several historic sites bear a close relationship to both the Town and the river: the Dark Walk, a historic parkway along the south bank of the river; the Colonial Racepath and Akenatzy Indian Village, and the Montrose Estate laid out in the 1850's by English landscape gardener, Thomas Paxton.

The Eno River has been the context for considerable debate and controversy in its more recent history. In 1966, as a result of a recommendation by the Durham Department of Water Resources, the river was designated as a high priority source of city water and the location of a major reservoir. The city began acquiring land for the proposed impoundment despite opposition by local landowners and environmentalists. The issue between preservationists and proponents of the city reservoir prompted the creation of the Eno River Association, a non-profit citizens group whose goal is the protection and preservation of the Eno River Valley. The Association was successful in its efforts to raise community support and as a result the city abandoned its reservoir proposal in 1973.

Because of the Eno River Association's promotion among State agencies, the support of the State Division of Parks and Recreation was gained. Through their efforts, a proposal to establish a State Park along the Eno River — a final and sure way of maintaining the protection of the river — was initiated. On May 17, 1972, the State Board of Conservation and Development approved and endorsed the concept of a State Park on the Eno River. Soon after, the first parcel of land, a one hundred twenty-hectare (three hundred acre) tract known as the Red Hills Farm, was acquired by The Nature Conservancy, and transferred to the State.

In 1975, approximately two hundred forty hectares (six hundred acres) of land originally acquired by the City of Durham for the reservoir was sold to the State for incorporation into the Eno River State Park. At this time the State had managed to acquire scattered parcels along a sixteen-kilometer (ten-mile) reach of river with the help of The Nature Conservancy. Including the City property, the Park land then totaled about four hundred forty five hectares (eleven hundred acres).

During the summer of 1975, the Master Plan activity began. In August, three alternative plans were presented at a public meeting held in Hillsborough. The alternative plans illustrated, with some variation in park facility locations, a river corridor extending from Guess Road west along the river to near Hillsborough, a distance of some twenty-nine kilometers (eighteen miles). Some residents, particularly those owning land

along the western portion of the river in Orange County, were outwardly upset and critical of the State's intentions and particularly the State's use of eminent domain in acquiring land from unwilling sellers. Unrest grew as proponents of both sides debated the issue. In September, Orange County formally created a task force to study the objectives of private owners in relation to the stated objective of river protection. State Park planning was curtailed at the request of County officials. In May 1976, the Orange County Eno River Task Force presented its findings to the County but they remained split on the issue of eminent domain as a tool for river protection. The County subsequently adopted a policy statement which underscored the desire to protect the river in perpetuity and promoted both State Park ownership and restricted private ownership as means of river protection. Restriction on the use of privately-owned land would be enforced by County conservation zoning and deed restrictions including covenants or easements enforced by a public agency. In the policy statement, the state was requested to utilize adversary condemnation only as a tool for river protection and not as a means for expanding the State Park.

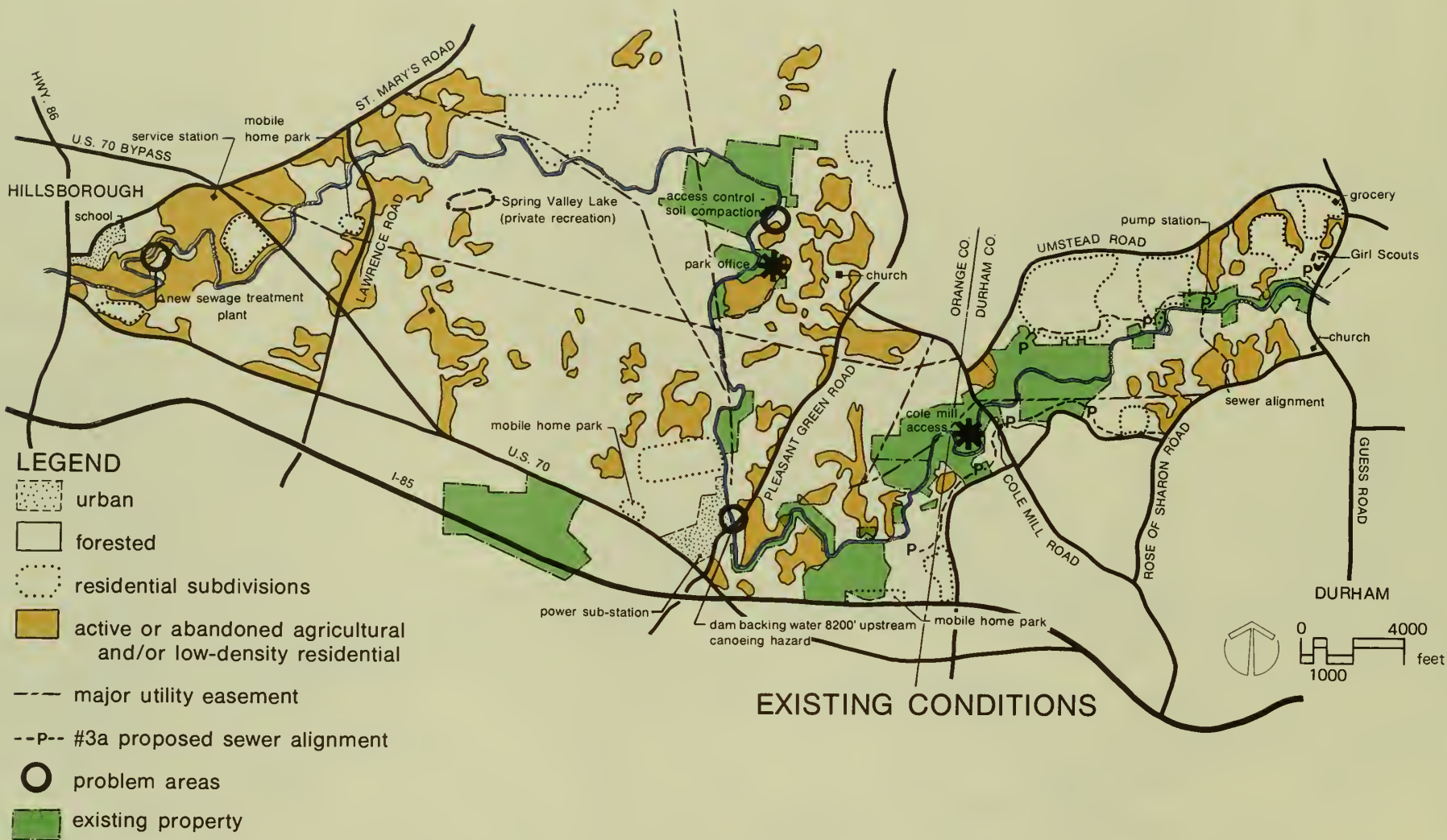
The master planning for the park was resumed in August, 1976. The main effort was to complete the plan and receive departmental approval so that a major cost-sharing project could be pursued with the U.S. Department of Agriculture, Soil Conservation Service (SCS). In the same month, however, a lawsuit was filed against the State alleging that the adoption of a master plan constituted an unlawful taking of property. The suit was brought by seven landowners near Hillsborough. A restraining order and injunction was placed on the master planning activity and remained in effect until November, 1978, when the North Carolina Supreme Court denied a petition for discretionary review (to reverse the Court of Appeals decision favoring the State). As a result of the lawsuit, formal planning and subsequent cost-sharing projects were delayed for over two years.

The master planning for the park was resumed in December, 1978. The content of this plan is presented in the following pages of this report.









## ADJACENT LAND USE AND DEVELOPMENT CONTEXT

Although still predominately rural, the Eno River area has undergone increasing suburbanization over the past 25 years. This is due to the proximity of Interstate 85 and U.S. 70, and the City of Durham. The rate of change and development is certainly much greater and most visible in the eastern portion of the valley nearer Durham, but physical growth is actually a regional issue.

A number of residential subdivisions have been developed beginning with the "Willowhaven" development in Durham County (between Cole Mill Road and Guess Road) in the early 1960's. Also in the sixties, the "Mountain View" development east of Hillsborough and "Brigadoon" residential subdivision off Linden Road, north of U.S. 70 were begun. In 1968, "Bluffs of the Eno", a low-density residential estate, was established and continues a slow development. Homes are located on large, two and four-fifths-hectare (seven-acre) tracts overlooking the river. One house is situated on a bluff less than forty-five meters (one hundred fifty feet) from the river's edge.

In 1965, sewer lines were installed under and along the river bank between Guess Road and Roxboro Road. As a result, residential growth north of the river has been spurred. A proposal to extend Durham sanitary sewer services along the Eno from Guess Road to a point west of Cole Mill Road was approved by the City Council in 1975. The planned alignment avoids the State Park land, locating the sewer line on high ground and proposing only one river crossing in the area, with the aid of nine pump stations west of Guess Road. With the development of this sewer line, suburbanization is expected to increase markedly in this area.

As a result of this development, particularly road construction, some siltation has occurred in tributaries of the Eno. Use of the river banks has increased, causing soil compaction and destruction of ground cover vegetation in isolated situations. But most serious has been the increase in the use of firearms and motorbikes in the area. Increased park staff, however, has enabled more intensive patrol thus reducing the impact of this problem on the park.

While land conversion has not occurred at the same rate as in Durham, new development is increasing on the outskirts of Hillsborough and having an impact on the river. Immediately east of the N.C. 86 bridge a new sanitary sewer line has been installed in the flood plain on the river's north bank, and a new sewage treatment plant for Hillsborough was built on the south side of the river east of town. Currently the landscape remains largely rural in character with marginal commercial and institutional uses occurring along the primary roads. Regional planners believe, however, low-density residential use will prevail as extensions of Durham and Hillsborough, with agricultural land use remaining between.

A large forested area, central in the Park Study Area and known as the Du Bose Tract, underwent an extensive logging operation during 1976. Although the cutting was selective, leaving a large acreage of younger forest intact, logging roads are conspicuous along the ridges. Timber was removed on the ridges, on the shallower slopes, and the flood plains along a mile and a half of river.

In 1969, the "Research Triangle Regional Planning Guide" proposed the establishment of the "Eno Wilderness Area", a 2000-2800 hectare (5000-7000 acre) park encompassing the Eno River, and Du Bose Tract, and connecting to a larger open space system, intended to provide physical continuity within a regional framework. The Eno River State Park with its final proposed boundaries could serve as the core of such a proposal provided funding or donation makes the acquisition of the remaining acreage feasible.

Four governmental jurisdictions, Durham County, the City of Durham, Orange County, and the Town of Hillsborough, cover the thirty-two kilometers (twenty miles) of river from Roxboro Road in Durham, to N.C. 86 in Hillsborough. Each of these jurisdictions has a zoning ordinance which applies to parts of the Eno River. Only a relatively short gap of the river between Hillsborough's District and the Eno Township District is not covered by an ordinance.





## REGIONAL RECREATION

The supply of existing and proposed recreational facilities in the region is large compared to other parts of the State, yet it falls short of minimum standards. While the municipal supply of recreational facilities is substantial in the urban areas, it is more intensive in nature and not similar to the resource-oriented services provided by regional facilities such as State Parks or county "country" parks. For this reason, the facilities having an exclusively urban context were not studied for their specific bearing on the Eno River.

Within a eighty-kilometer (fifty-mile) radius of the Eno River area there are two other State Parks — William B. Umstead and Raven Rock. Also, three Federal Corps of Engineer projects, Falls Lake, B. Everett Jordan Reservoir, and Randleman Reservoir are planned to contain extensive recreational facilities.

Umstead Park is one of the largest and most heavily used in the State Park System. Its location, between Raleigh and Durham, results in high day use. The Master Plan produced for the park in 1974 recommends a four-phase development program which will expand the day and overnight program. A range of overnight facilities from weekend/vehicular-oriented camping to primitive, pack-in camping is recommended as well as a public swimming beach to augment existing boating facilities. A large Interpretive Center is proposed as a focus for the park.

The Master Plan for Raven Rock has recently been completed and also proposes phased development for both family and group activities with particular emphasis on Interpretation. In general, State Park master plans are aimed at providing for a diverse number of activities, emphasizing natural settings and low-intensity development.

On the other hand, recreation facilities to be managed by the Division of Parks and Recreation at the proposed Corps of Engineer reservoirs are planned to be more intensively developed for both day and overnight use. In this way, the "Falls", "Jordan" and "Randleman" projects will become designated State Recreation Areas. Each will have large bodies of open water as the main focus for recreational activities.

Lake Michie, in northern Durham County, is a 218-hectare (540-acre) impoundment providing for recreational use including picknicking, boating, and fishing. Other water-related recreational uses such as swimming and power boating are not permitted since it is a municipal water supply.

The Spring Valley Lake recreation area in Orange County is privately owned but open to the public. In addition to swimming, a small picnic/concession area is provided. Spring Valley is primarily intended for local residents and receives considerable use during the summer months.

The projected land acreages for the five State-managed facilities within the region are as follows:

	Hectares	Acres
William B. Umstead State Park	2,366	5,847
Raven Rock State Park	2,233	5,518
Falls of the Neuse Reservoir	2,104	5,200
B. Everett Jordan Reservoir	1,052	2,600
Randleman Reservoir	1,004	2,480
Total	8,759	21,645

Given a total population within an eighty-kilometer (fifty-mile) radius of the Eno River area of 1,301,100 people, gross regional acreage requirements for public recreation lands can be projected. At the suggested North Carolina standard of eight hectares (twenty acres) per 1,000 population, the regional recreation land requirement is in the range of 10,500 hectares (26,000 acres). This projection indicates a comparatively small disparity between land proposed and the desired standard for State-managed recreation land. Given this situation, the Eno River State Park could fulfill the need for an additional twelve hundred or so hectares (three thousand acres). Utilizing the national average of sixteen hectares (forty acres) per 1,000 population, however, a projected 25,000 total hectares (62,000 acres) are required — a shortfall of more than 10,500 hectares (26,000 acres).

Underscoring the significance of the shortfall is the fact that these estimates are based on a stable population. Not taken into account are projected growth trends indicating an expected rise of twenty percent in the regional population by 1985.



**SITE FEATURES & EXISTING USE**





*Photo by Duncan Heron*

## **SITE FEATURES AND EXISTING USE**

From Guess Road in Durham to N.C. 86 in Hillsborough, the Eno River provides the setting for numerous historical, recreational, and scenic features. Points of historical interest include various mills, homesites, and trails.

Scenic and recreational features along the river include as many as ten swimming holes. The best of these are Bobbitt Hole, west of Cole Mill Road, Bob's Hole, between Cole Mill Road and Guess Road, and Piper's Hole, south of Cate's Ford. Bobbitt Hole, a popular place for gatherings, is regarded as one of the most scenic locations on the river. Also, immediately upstream is a tall bluff overlooking "Drowning Horse Pond."

The area both east and west of Cole Mill Road is actively used by the public and, from this viewpoint, will present a greater management problem for a State Park. A high priority will necessarily be given to patrolling this stretch of river, particularly from the points providing access to the Pump Station, Bobbitt Hole, Cabe's Mill, and the Cole Mill Road right-of-way.

Cate's Ford represents the most popular existing use area on the river. On a nice weekend day as many as a hundred people may converge on the Ford area, which includes the Ford,

rock outcrops, and bluffs. Activities range from picnicking to riding dune buggies across the river. The existing problem at the Ford is compounded by a non-resident private landowner. Gates erected by the landowner on the access road were destroyed soon after installation. Control of adjacent existing State Park property has been more difficult than normal due to this situation at Cate's Ford. As the most important point of concern on the river for a State Park, this area will require controlled access and use restrictions.

Other primary use areas on the river include the access point from Pleasant Green Road onto Duke Power property and along the right-of-way on Guess Road. Both areas are currently used by hikers, fishermen, and canoeists.

The location and extent of the most popular trails along the river are important in a study of existing use and features. Hiking routes recommended by the Eno Association provide a good cross section of trail types with a variety of purposes and lengths represented (see Site Features and Existing Use map). Some of the routes follow paths probably first used by Indians long before the arrival of white men. Establishment of the State Park will do little to alter this traditional use.







## CLIMATE

The Eno River area has a humid, temperate climate. Daily temperatures are normally between  $-5^{\circ}\text{C}$  and  $32^{\circ}\text{C}$  ( $31^{\circ}\text{F}$  and  $90^{\circ}\text{F}$ ) with the average daily temperature for the basin being about  $15.5^{\circ}\text{C}$  ( $60^{\circ}\text{F}$ ). Temperatures vary seasonally; December and January are the coldest months with a mean temperature of about  $5^{\circ}\text{C}$  ( $41^{\circ}\text{F}$ ) while July is generally the warmest month with a mean temperature of  $25.5^{\circ}\text{C}$  ( $78^{\circ}\text{F}$ ). Extremes have varied from  $-19^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  ( $-2^{\circ}\text{F}$  to  $104^{\circ}\text{F}$ ).

Precipitation occurs chiefly as rainfall and varies with the seasons. The mean annual precipitation is about 114 centimeters (45 inches). Rainfall is generally well distributed through the year, but is slightly greater during the summer months. Yearly amounts may vary from less than 76 centimeters (30 inches) in a dry year to over 152 centimeters (60 inches) in a wet year. Maximum recorded precipitation amounts were the result of the infrequent passage of hurricanes through the state.

Snowfall represents only a minor part of the annual precipitation. Average annual snow, most of which falls in two or three minor storms, is 18.8 centimeters (7.4 inches) per year at the National Weather Service Station at Raleigh-Durham Airport.



TROUT LILY, *Duncan Heron*





## PHYSIOGRAPHY AND GEOLOGY

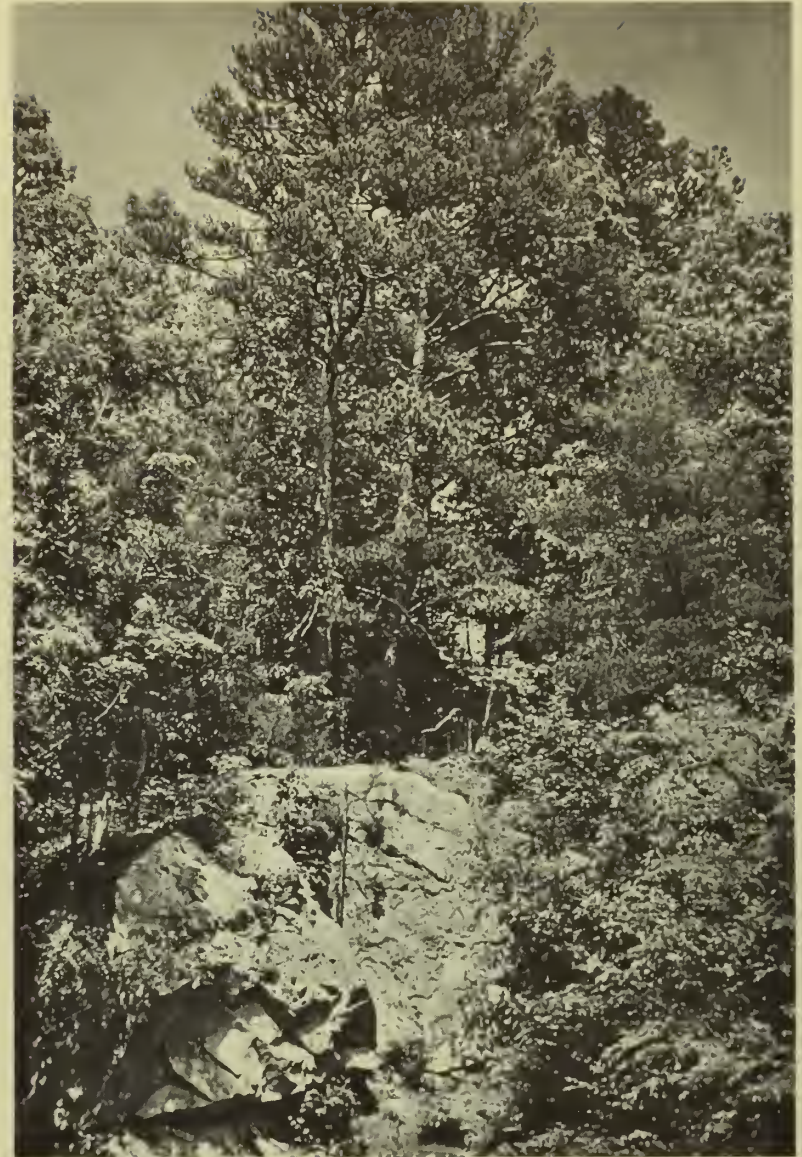
The Eno River State Park area lies wholly within the Piedmont Physiographic Province. Although most of this area has a gently rolling topography, there are parts of the Eno River Valley that are gorge-like with narrow flood plains and steep bluffs along the river's edge. This is particularly true on two stretches of the river — between Lawrence Road and Cate's Ford, and further downstream, between Pleasant Green Road and Guess Road. While these conditions are not continuous throughout these areas, they do predominate.

The range of relief within the study area is about 146 meters (480 feet) with a maximum elevation of 238 meters (782 feet) and a minimum of about 92 meters (302 feet) under the Guess Road bridge. The river gradient averages about 1.9 meters per kilometer (9.9 feet per mile).

Between Lawrence Road and Cates's Ford there is quite a large area of forested land, commonly known as the "Eno Wilderness." Here small intermittent streams wind their way through narrow valleys where slopes exceeding 15% are common. It is no wonder that this area, with its exaggerated topographic relief, has been relatively protected from spreading suburban development.

Areas having a gradient over 9% are limited in their usefulness for location of park roads, parking areas and sites for picnicking and camping. Generally these types of park development should not be located at slopes greater than 8%, while hiking and bridle trails can be provided on slopes up to 15%. In situations with greater than 15% gradients, trails should run parallel to the contours as much as possible.

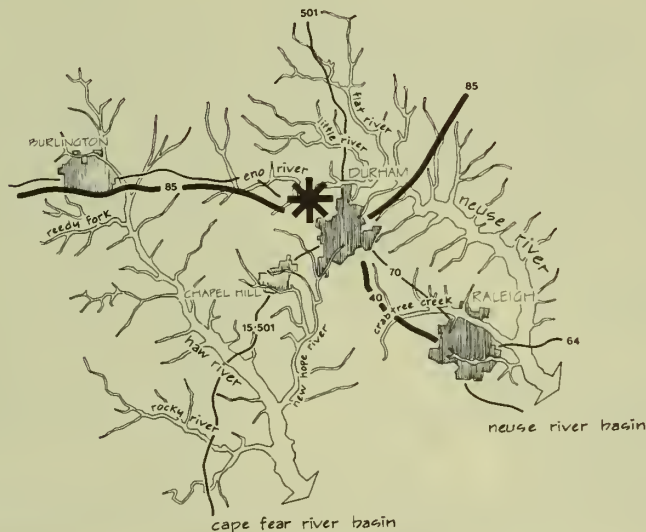
Eno River State Park lies in the Carolina slate belt. The geology of this area consists of slightly metamorphosed volcanic and sedimentary rocks that are tightly to openly folded, faulted and intruded by igneous plutons. Within this metavolcanic unit, the river valley is narrow and steep-walled with frequent rock outcroppings along the river and rocky rapids in the river itself.



DROWNING HORSE POND

## HYDROLOGY

The drainage basin of the Eno is about 34,980 hectares (135 square miles) at the easternmost boundary of the study area, Guess Road. The 100-year flood elevation for this point has been set at 95.4 meters (313 feet). Average river flow is 1783 liters/second (63.0 cubic feet/second) at Hillsborough, and 2250 liters/second (79.5 cubic feet/second) at the stream gaging station near Roxboro Road in Durham. Variation from the average is wide, however, with high flows following heavy rains, and rapid drops in flow rates occurring soon afterward.



REGIONAL DRAINAGE

Maximum runoff occurs in late winter, when streams in the basin are usually at their highest point. The maximum discharge recorded for the Eno River within the eleven year period of record is 2570 liters/second (90.8 cfs. [February, 1965]), at Durham. From early April to mid-October vegetative and evaporative demands exceed the available rainfall, and stream flows show a general decline. The minimum recorded discharge is 15 liters/second (0.53 cfs [October, 1968]). The 7-day, 10-year minimum is 70.75 liters/second (2.5 cfs) in Durham, 50 liters/second (1.7 cfs) at the U.S. 70 Bypass bridge, and only 23.7 liters/second (0.84 cfs) at Hillsborough.

The Eno is only a moderately warm piedmont stream. Recordings made in the warmest month of the year, August, indicate a temperature of 25°C (77°F) near Hillsborough, and 25.5°C (79°F) near Durham. The highest temperature ever recorded was 30°C (86°F).

The river has been designated as a sanitation class "A-II" stream and a survey done by the North Carolina Wildlife Resources Commission classifies the stream as capable of supporting largemouth bass between Lawrence Road and Guess Road. As such, it is turbid at times, but becomes relatively clear during periods with an absence of moderate to heavy rainfall. However, there are indications that the water quality standards for the river segment from Lawrence Road to Rhode's Creek are not being met consistently. Upstream from Lawrence Road to the Eno Cotton Mills Dam, the river is classified as class "C".

The dissolved oxygen ratio of the river has been recorded as 7.6-7.9 ppm with a pH ranging from 6.4 at Hillsborough to 7.5 at Cole Mill Road. The river bottom characteristically consists of sand, gravel, rocks, and detritus with some silt. Average width varies from 7.8 meters — 12.5 meters (25-40 feet).



Presently, the Eno is used as a water source by Hillsborough and the Orange-Alamance water system. Two major and one minor reservoir on the river currently provide this water, but many additional reservoirs have been proposed at various times for the Eno and its tributaries. With the exception of the sedimentation control pools above Lake Orange, most of these proposed impoundments are for water supply purposes. Durham has recently put the Eno at the bottom of its priority list of water sources.

There are several point sources of pollution which directly influence water quality within the study area. The town of Hillsborough operates a new 66 cubic meters/second (1.5 million gallons/day) tertiary wastewater treatment facility, correcting an overloading problem which previously led to numerous stream pollution violations. This new facility became operational on October 23, 1978. Lexington Homes, Incorporated of Hillsborough operates a .002 cubic meters/second (.005 million gallons/day) contact stabilization wastewater treatment facility that discharges into Cate's Creek, a Class "D" stream. This facility is presently operating at its designed capacity. Piedmont Minerals has a permit to discharge .13 cubic meters/second (.3 mgd) which is only restricted to amounts of suspended solids, indicating that the water is used in their mining process and not waste water from sewage treatment.

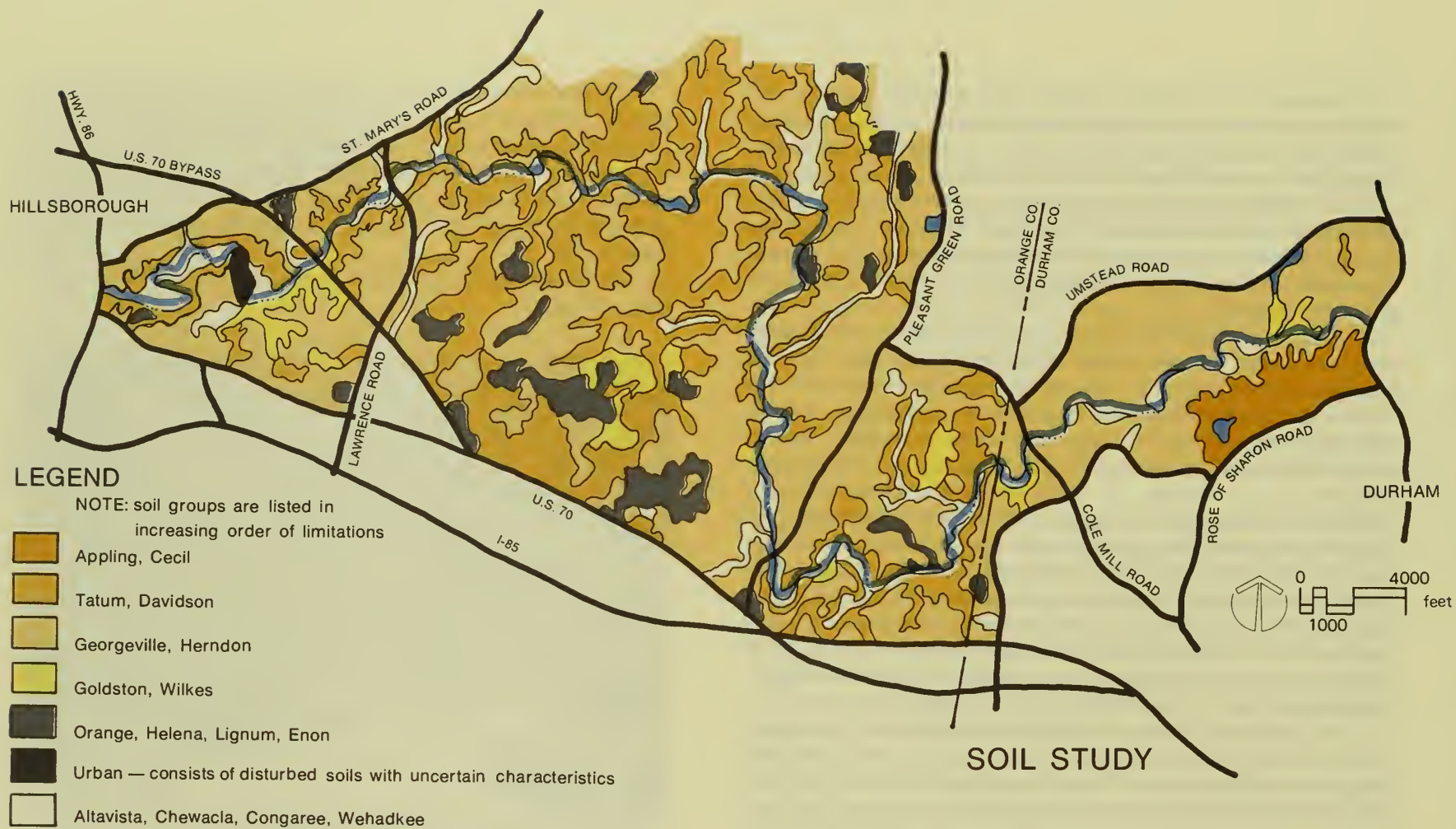
The non-point sources of pollution in the Eno River basin have a significant impact on water quality. No particular problems related to urban runoff have been reported or identified; however, agricultural runoff, both from fertilizers and from the several large and many small feedlots within the area, is believed to contribute pollutants to the surface waters of this basin.

Groundwaters from this area are principally calcium (40%), sodium (24%), and magnesium (28%) bicarbonate types. Total hardness ranges from 11 ppm (soft) to 492 ppm (very hard) with a median of 102 ppm (moderately hard). Well yields average in excess of 1.2 liters (.31 gallons) per minute per meter (3.3 feet) of depth within the study area. Average well depth is about 33 meters (108 feet).

In general, groundwater in the area is rated fair to excellent for most uses.



*Photo by Duncan Heron*





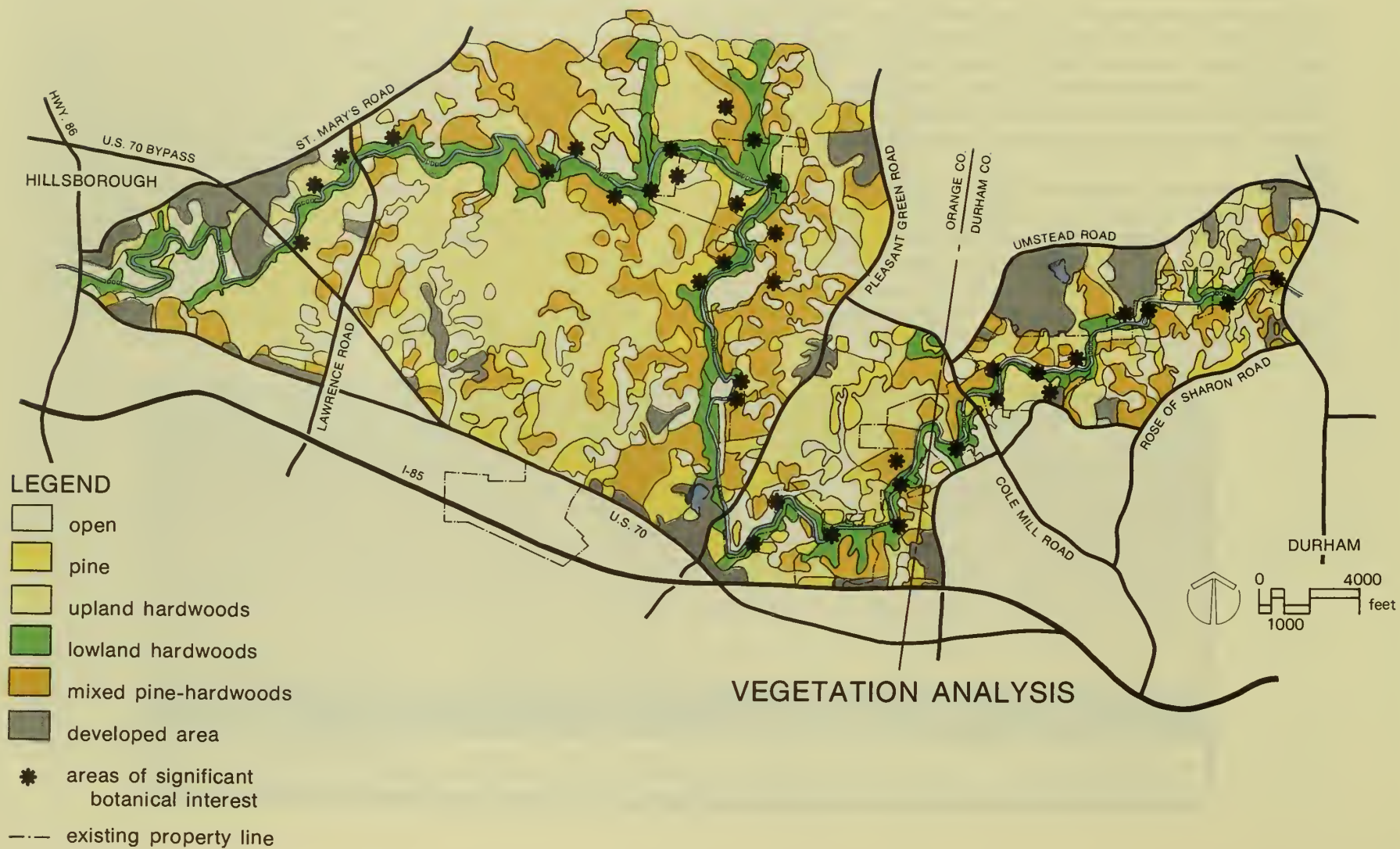
## SOILS

Nineteen soil series, not including the urban classification, comprise those soils within the park study area. The soil series were grouped into six categories, according to similar limitations for the six uses most likely to occur and for which data was available (see limitations matrix). The six categories are listed in increasing order of the degree of their limitations. In general, the soils for this area have moderate to severe limitations for most uses.

The limitations established by the U.S.D.A. Soil Conservation Service are based on soil characteristics affecting each of the six use categories. Soil features that affect the rating of soils for small buildings (under three stories without basements) are those relating to load-supporting capacity, resistance to settlement under load, and ease of excavation. Soil properties considered for septic systems are those involving both absorption

of effluent and construction and operation of the system. Roads were limited by the load-supporting capacity of the soils and the stability of the sub-grade, as well as the workability and quantity of cut and fill material available. Desirable soils for camping areas require little site preparation and should be suitable for heavy foot traffic. The best soils for camping have mild slopes, good drainage, a surface free of rocks and coarse fragments, freedom from flooding during heavy periods of use, and a surface texture that is firm even after rains, but not dusty when dry. Similar attributes are desirable for picnicking, though coarse fragments are not such a problem. However, soils in picnic areas must be capable of supporting durable vegetative cover. Soil ratings for trails are based on those properties affecting foot traffic such as wetness, surface texture, and coarse fragments and on those that affect design, construction, and maintenance such as erodibility, rockiness, or stoniness.

SOIL SERIES	LIMITATIONS					
	BUILDINGS	SEPTIC FIELDS	ROADS	CAMPSES	PICNIC AREAS	TRAILS
A. APPLING SANDY LOAM CECIL FINE SANDY LOAM	MODERATE texture & slope or shrink-swell	MODERATE permeability & slope	MODERATE traffic support capacity	SLIGHT-MODERATE gravel surface & slope	SLIGHT-MODERATE gravel surface & slope	SLIGHT-MODERATE gravel surface
B. TATUM SILT LOAM DAWDSON CLAY LOAM	MODERATE-SEVERE shrink-swell & slope	MODERATE-SEVERE permeability & slope	MODERATE shrink-swell	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope
C. GEORGEVILLE SILT LOAM GEORGEVILLE SILTY CLAY LOAM GEORGEVILLE URBAN HERNDON SILT LOAM	MODERATE bearing strength & shrink-swell	MODERATE-SEVERE permeability & shrink-swell	SEVERE traffic support capacity	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope
D. GOLDSTON SLATY SILT LOAM WILKES GRAVELLY LOAM	SLIGHT-MODERATE depending on slope	SEVERE depth to bedrock	SEVERE traffic support capacity	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope	SLIGHT-SEVERE depending on slope
E.						
F. ALTAVISTA FINE SANDY LOAM CHEWALLA LOAM CONGAREE SANDY LOAM WEHNDKEE SILT LOAM	MODERATE-SEVERE seasonal flooding	SEVERE seasonal flooding	MODERATE-SEVERE seasonal flooding	SEVERE seasonal flooding	MODERATE-SEVERE seasonal flooding	MODERATE-SEVERE seasonal flooding





## VEGETATION

The last remnant of virgin timber in the Eno Basin was cut in 1941. Most of the forests of the area have been cut over repeatedly and wastefully with no proper forest management. The hardwoods are of particularly low quality, leaving loblolly and shortleaf pine as the most valuable commercial species.

For the purposes of the master plan study, seven vegetative communities have been mapped and described. These are: open fields, pine, upland hardwoods, lowland hardwoods, bottomland hardwoods, mixed pine-hardwoods, and "others." In addition, environmentally sensitive areas are marked with an asterisk on the vegetation map.

The open fields category includes cultivated land, pastures, fallow fields, and abandoned fields. Abandoned fields in various stages of reversion to forest are a common sight along the Eno as agriculture has become less intense in the area.

Vegetational succession on abandoned fields is rapid, and tree seedlings are often apparent within a year or two after abandonment. Crabgrass and a mixture of pioneer herbaceous species invade abandoned fields the first year. Within the next year or so they are replaced by species such as Queen Anne's Lace, asters, and broomsedge. Blackberries, sumacs, and other shrubs appear about the third year after abandonment, by which time tree seedlings are also becoming well established. Due to the rapid growth of the early successional tree species, they quickly become dominant and begin crowding out herbaceous plants less than ten years after abandonment.

On upland fields the earliest invading tree species are usually shortleaf pine, Virginia pine, eastern red cedar, and persimmon. On wetter lowland sites loblolly pine, sweetgum, yellow-poplar, red maple, and winged elm are more common.

Pines appear throughout the study area. Loblolly in particular grows on a wide variety of sites, reaching maximum growth on those soils with deep topsoil, plenty of moisture and



LADY SLIPPER, *Duncan Heron*

good drainage. Near the river, loblolly is a relatively infrequent species, occurring primarily in plantations or as a pioneer species in old fields. It tends to form pure stands in these instances, with an open understory comprised of hardwoods characteristic for the site and often a dense cover. Loblolly can also be found as a minor associate in stands of Virginia and shortleaf pine.

Shortleaf pine is more adaptable to drier and finer textured soils. Pure stands of shortleaf appear on dry upland soils with a medium-dense understory. Upland hardwoods are the characteristic understory, coupled with varying densities of honeysuckle, depending on the moisture available to the site. Mixtures of loblolly and shortleaf are frequent.

Virginia pine appears with shortleaf and/or loblolly pine and; less frequently, in association with upland and lowland hardwood types. Common understory species include other pioneer species and lowland hardwoods. On extremely dry sites upland hardwoods may be found in an open understory.



MOUNTAIN LAUREL, *Duncan Heron*

The upland hardwoods community is the most widespread forest type in the Eno Valley, usually considered the typical upland climax. On the more mesic sites, the most common overstory species are white oak, northern and southern red oaks, and several hickory species. Scattered pines, particularly loblolly, are frequent but not as prevalent as on the more xeric upland sites, where post oak and blackjack oak dominate. An unusual, almost pure stand of chestnut oak, typical of the southern Appalachians, exists on a rocky upland site immediately east of U.S. 70, east of Hillsborough.

Important associated species in the overstory may be black oak and scarlet oak, however, along the Eno River, black oak rarely reaches overstory proportion. Common understory species include sourwood, dogwood, blackgum, red maple, red cedar, persimmon, sassafras, and various viburnum species. Many of the common spring wildflowers are also found in this forest type.

In view of its high stability, resistance to disturbance from use, and aesthetic qualities, such stands are the most desirable of any in the region for most park and recreation uses. They can be maintained in a fairly constant condition with a minimum of manipulation.

On the more xeric upland sites, post oak is the most common overstory species, with white oak and hickories appearing in lesser numbers. Both the overstory and understory are more open and bushy than in the previous type. Black oak, poplar, sweetgum, red oak, and hickories occupy the understory. Due to the greater openness, Virginia and shortleaf pine are fairly common in both the overstories and understories. Shrubs and woody vines may be dense and difficult to penetrate, but generally the understory is extremely open.

Post oak and blackjack oak predominate on dry south facing bluffs, thin soiled areas around rock outcrops, and on extremely eroded soils. Such stands are generally very open and irregular. The trees tend to be gnarled and shrubby, rarely exceeding 30 feet in height with white oak, southern red oak and mockernut hickory as major components of the overstory. Shortleaf pine is often found in small numbers in the overstory and understory along with red cedar, dogwood, viburnums, persimmon, and various shrubs.

The lowland hardwood community is relatively unusual, occurring on sites with deep, rich, well-drained soil with minimal disturbance. Stable talus slopes below bluffs or terraces above moist floodplains are the most common sites, but few mature stands of this type exist along the Eno. Beech is the most characteristic species, although it is usually not as abundant as white oak, red oak, sweetgum, and southern sugar maple. Willow oak, yellow poplar, and shagbark hickory may also be present. Sugar maple usually dominates the understory along with dogwood, deciduous holly, hornbeam and hophornbeam. Shrubs are infrequent, viburnum species being the most common. Woody vines, especially grape and poison ivy are abundant. Mountain laurel and rhododendron are found on slopes and bluffs adjacent to this type.



Because of its natural beauty and usually open understory, recreationists favor this type. However, due to its shallow root system, this community is fragile. Thus, efforts should be made to preserve it.

The bottomland hardwood community appears on poorly drained flats along the river and its adjoining tributaries. Poplar, sweetgum, ash, elm, and red maple generally comprise the overstory. However, river birch and sycamore are often present as holdovers from earlier successional stands, and sometimes dominate the stand, particularly along narrow strips along the banks of the river and its major tributaries. Hackberry may be an associate of these latter two on rich, moist, alluvial soils.

Pure stands of poplar and/or sweetgum may be found on moist, well-drained, loose-textured soils of moderate depth. Willow oak is a component of older stands. On deep, rich, moist soils, walnut is an associate species, appearing in groves several places along the river. Hackberry, swamp chestnut oak, and shagbark hickory are also associate species. Hornbeam, hophornbeam, and red mulberry, with an interspersed of red cedar and dogwood, form the typical understory. The most common shrub species are downy arrow-wood, button bush, and elderberry, with deciduous holly and eastern wahoo often present. Woody vines (trumpet vine, Virginia creeper, grape, honeysuckle, greenbriar, and poison ivy) are abundant, forming a dense jungle-like undergrowth.

The large trees and dense stands of these bottomland mixed hardwoods are often of high aesthetic quality, although young stands may be dense and impenetrable. More than any other type, these bottomland hardwoods create an enclosed canopied landscape that presents a striking contrast to the openness of the river.

Potential is fairly high for recreational uses such as hiking, river access, and limited development for picnic and campsites on well drained sites. However, controlling the undergrowth without extensive and repeated clearing is difficult.

The mixed pine-hardwood community is generally found on upland flatwoods, on xeric to mesic slopes as well as in

relatively mesic ravines. A variable ratio of pines to hardwoods exists. For mapping purposes, this community was defined as having a pine composition of 25%-75%. Stands of less than 25% were considered hardwood communities, while those comprised of more than 75% pines were classified pine communities.

The vegetation of the mixed pine-hardwood community varies along an apparent moisture gradient. Drier upland sites are likely to have mixtures of shortleaf and loblolly pines, and such hardwoods as post oak and blackjack oak. The more mesic upland sites have a hardwood composition similar to that of the hardwood community characteristic of such sites, including white, black, and red oaks. The lower and more mesic ravines, slopes, and bluff tops are more likely dominated by loblolly and Virginia pines along with those hardwoods more characteristic of the lowland hardwood community.

The "other" category denotes a conglomeration of developed areas, subdivisions, active quarries, etc.



DUTCHMAN'S BRITCHES, *Duncan Heron*

## WILDLIFE

The upland hardwood forest community is a significant wildlife habitat because of its production of mast, a primary winter food of forest game in the area, including squirrel, turkey, deer and certain waterfowl. The more mesic sites usually provide ideal squirrel habitat where a wide variety of heavy- and light-seeded species are present. Such variety assures a more stable food supply and reduces the frequency of fluctuations in populations typical of oak-hickory sites.

Such sites also offer potential as wild turkey habitat depending on site quality and the general nature of the stands. Yields of forage, fruit and insects depend upon open forest crowns with ample light penetration. Unless this overstory prevails, the needs of the turkey probably will not be fulfilled. In addition, without some interspersed pines, the need for roosting, winter cover, and escape cover will not be met. On poor sites where stands are sparse, nesting and brooding ranges are usually ample, but on better sites with vigorous, fully stocked stands these conditions are infrequent and are established only by creating permanent openings.

Generally speaking, this community is suitable for deer, although again the capacity varies widely with stand conditions. Mast is the primary winter season food, with understory browse, fruit, and forage serving as reserves.

Other species such as quail, rabbits, doves, and waterfowl should be present in situations where this forest type borders on open areas. Many species of songbirds (e.g., rufous-sided towhees, warblers, titmice, chickadees, nuthatches, and woodpeckers) occupy different strata from the canopy to the ground layer. Several predatory animals normally found include great horned owls, foxes, mink, weasels, and raccoons. Opossums are present as well as several species of mice, shrews, and moles.

More xeric sites will support a moderate population of small game. Mast yields fluctuate greatly from year to year, and the over-all carrying capacity for wildlife is lower than in stands on better soils. Deer populations would also be expected to be lower due to the higher proportion of unpreferred browse. Many of the same small mammals mentioned above are also likely to be present in these types.

The lowland hardwood community is probably the best squirrel habitat in the area since it contains a wide variety of preferred food species. Quail, dove, and waterfowl populations are also high and stable in this community. The heavy maple understory is a favorite deer browse and could support a moderate to high population. The overall wildlife value of this type, however, is limited by the small and infrequent mature stands.



The lush understory of the bottomland hardwood community furnishes abundant supplemental food as well as camouflage for foraging wildlife species; however, den trees are sometimes limited. Dogwoods and wild grapes are particularly important fall and winter foods. Red maple flowers, buds, and seeds are important spring foods.

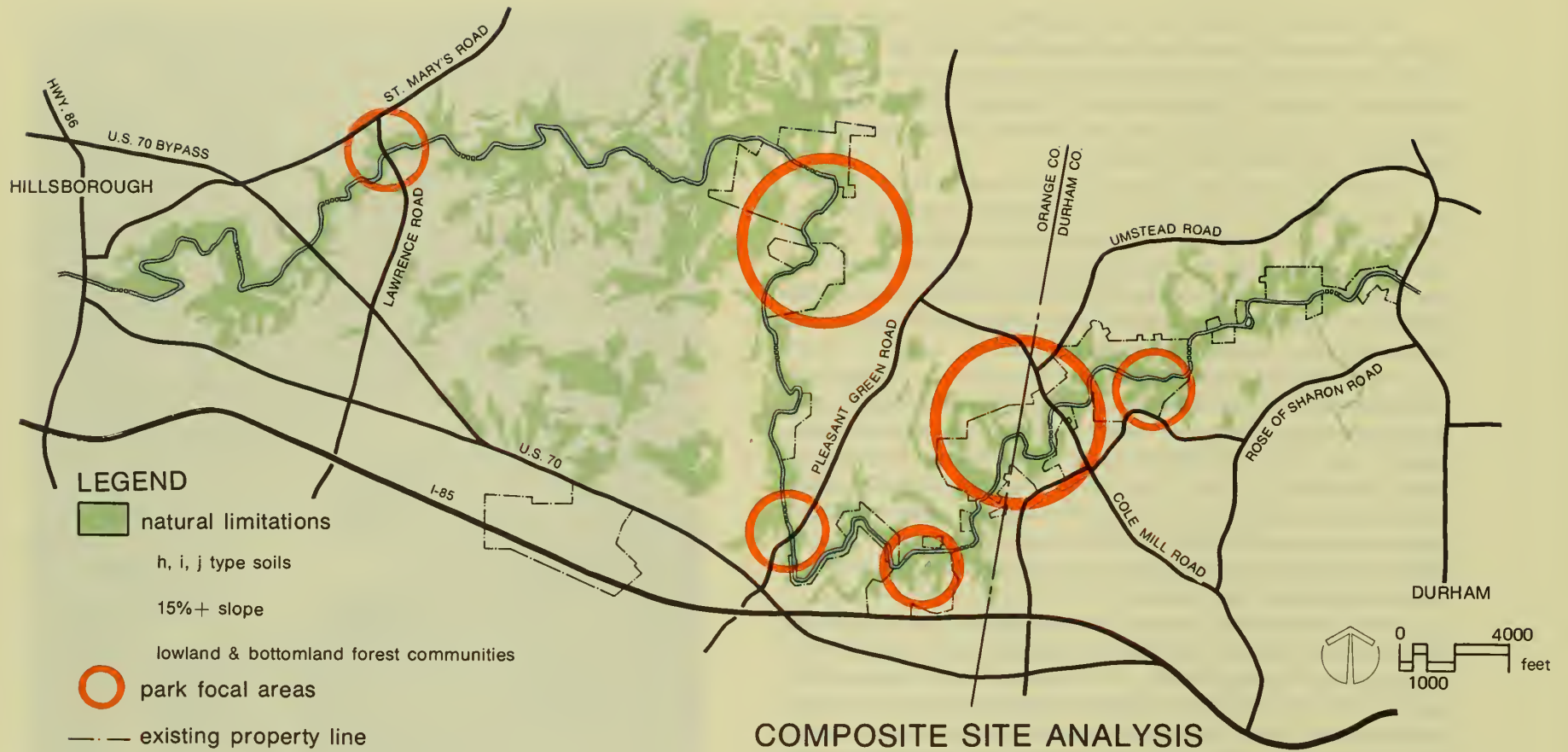
Quail and turkey are sometimes present in varying numbers, depending on stand size and condition. This community normally accommodates a good population of songbirds due to protection offered by the relatively dense understory. Small mammals (mice, moles, shrews, chipmunks, etc.) occupy the ground and herbaceous layers, while other fur-bearers and predators occur throughout the forest.

Those stands characterized by river birch and sycamore are moderately productive for wildlife, especially songbirds. They supply understory fruit, nesting sites, and escape cover for songbirds, quail, and waterfowl such as wood ducks. A moderate population of deer and rabbit may be present. Some stream-based fur-bearers such as raccoon, mink, weasel, beaver, and muskrat are likely to be found. Uncommon species sighted within the general study area include otter, woodchuck, osprey, and great blue heron.

The Eno River is listed as one of the best sport fishing streams in the Neuse River Basin. Although the river is classified as a largemouth bass stream, a number of other game species are also present, including redbreast, bluegill, catfish, crappie, redbfin pickerel, and the relatively unique redeye bass (located only in the Tar & Neuse River basins). The excellent water quality has prompted the North Carolina Wildlife Resources Commission to recommend the stocking of smallmouth bass in the Eno.



OPOSSUM, *Duncan Heron*





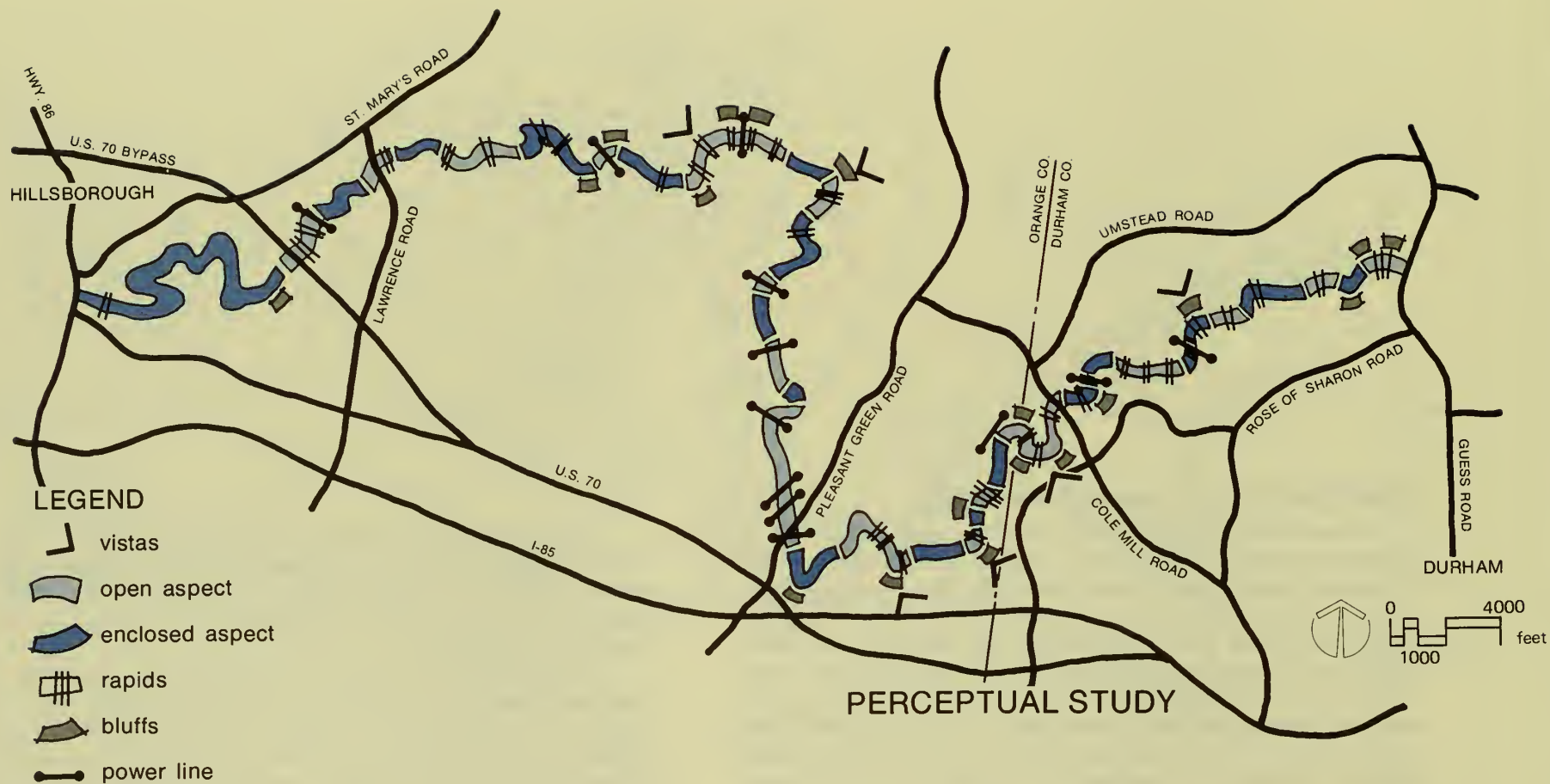
## COMPOSITE RESOURCE ANALYSIS

Areas having particular limitations for park development or otherwise needing protection are isolated and identified in the composite site analysis. These conditions include alluvial soils prone to frequent flooding, soils having severe limitations for development due to a high shrink-swell potential, and soils which have low infiltration and permeability rates. Slopes of 15% gradient or steeper are also incorporated because of the erosion problems and higher construction costs associated with development on steep slopes. Additionally, forest types identified as lowland or bottomland communities are isolated because of their fragile nature and problems associated with development, like adequate drainage. These categories collectively identify those lands to be excluded from "intensive" park use areas.

In relation to those lands presently owned by the Division of Parks and Recreation, the composite limitations provide insight into the usability of currently state-owned property. This is particularly important to the establishment of a program for development phasing.

Two general areas along the Eno River are identified as "park focal areas", or locations where features essential to a viable park development overlap. These areas offer good access from a primary road, land which is not severely limited for park use, and natural, historic, and scenic features which are numerous and noteworthy.

The composite site analysis is a basic framework for application of a conceptual program and development of plan alternatives.





## PERCEPTUAL STUDY

An analysis of the river corridor's appearance compares the scenic quality along certain stretches of the river and identifies areas with an abundance and variety of features. These are areas with high potential for park development.

The river was differentiated in terms of the "open" or "closed" aspect of the edge and tree canopy — a "closed" corridor having a dense, wooded edge and a tree canopy overhanging and enclosing the river. Other features identified in the study were significant rapids, rock outcrops and bluffs, and particularly attractive vistas. Also, intrusive elements were located such as powerlines and bridges.

Several patterns emerged as a result of the study. In general, the entire river corridor is well-contained or sheltered, giving an impression of privacy. The river appears somewhat sluggish upstream of Pleasant Green Road, due to the lengths of placid water, much of which is backed up by the Duke Power Dam. There is a sense of isolation upstream. Downstream from Pleasant Green Road the river has more rapids, and the banks are more developed, reducing the feeling of privacy a user finds. Additionally, more rapids occur in the "open" reaches along the river, probably because of the close relationship between rapids and rock outcrops or bluffs.



*Photo by Duncan Heron*







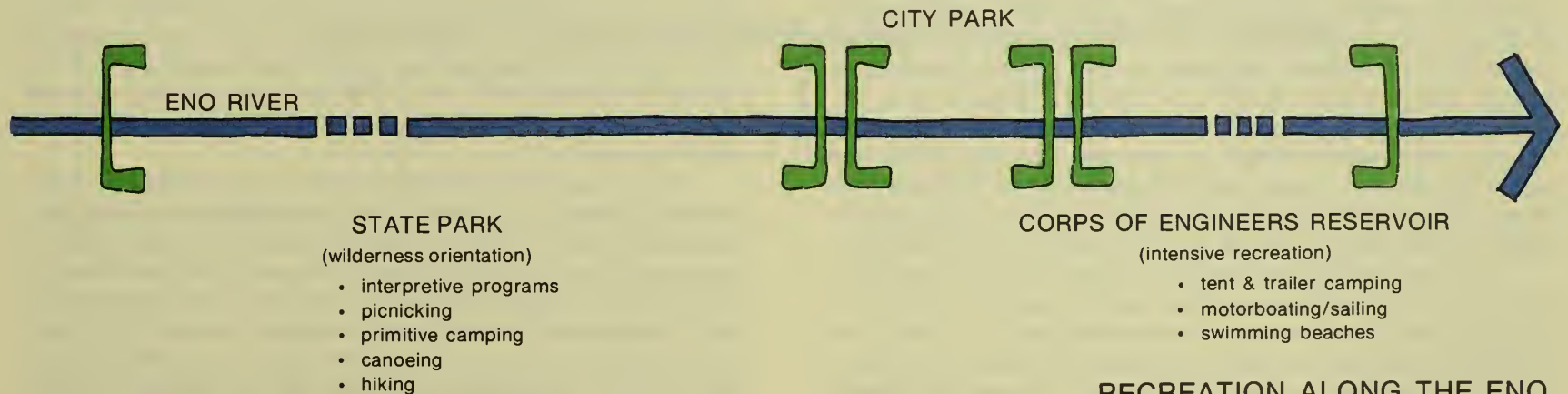
## CONCEPT

In a regional context, the potential exists for a unique open space program within the Eno/Neuse drainage corridor. Three physically linked recreation facilities are under development starting with the Eno River State Park near Hillsborough and running approximately 80 kilometers (50 miles) to the Falls Lake dam near Raleigh. A further extension of a regional park could result in an open space network connecting Falls Lake with William B. Umstead State Park and the B. Everett Jordan Reservoir via Raleigh and Durham greenway systems and Duke Forest lands. A statewide link might also be provided by the Mountains to Sea Trail, a state trail which will originate in the Great Smoky Mountains National Park and terminate at Jockey's Ridge State Park north of the Cape Hatteras National Seashore.

Within the concept of the Eno River State Park/Durham City Park/Falls Reservoir System, considerable potential exists for a greatly varied recreational program. By virtue of the physical attributes associated with each project and,

specifically, the legislative basis and management policies upon which each project is established, the three areas will act to serve different recreational interests. The Falls of the Neuse Reservoir will be designed for large scale, intensive recreational use. Activities will be oriented toward the large body of water and will include motor boating, sailing, and swimming. Overnight facilities will be geared predominately toward vehicular oriented camping. The facility will serve as a designated State Recreation Area.

The Durham City Park, already established along the Eno River between Guess Road and Roxboro Road, is aimed at providing for a number of recreational activities within a relatively small area. Most important is the "West Point" area accessible from Roxboro Road. This site has been developed as a day use area providing visitor parking, picnicking, and related facilities. Renovation of an old homestead and complete restoration of the West Point Mill has established the site as a major attraction. It has been used twice for the North Carolina Folklife Festival with an estimated attendance for the three-day-event exceeding one hundred and twenty thousand people. The



majority of the city park land will be left in an undeveloped condition providing for trails and other passive activities. A canoe landing will be associated with the West Point site.

The State Park is contiguous to the Durham City Park at Guess Road and continues westward. The need for a park which emphasizes non-intensive uses, the setting aside of significant forested parcels in perpetuity, and the interpretation of natural and historic resources is underscored by both the setting and relationship to the other recreation projects. This notion was also unanimously voiced by participants in the working sessions of the Eno public meetings.

The linear configuration of the Eno River State Park is unique in the North Carolina State Park System; no other park includes a long stretch of river corridor as the main park feature. Although the Eno River area does not offer a single, spectacular feature like a "Raven Rock" or a "Jockey's Ridge", the abundance of natural and historic features along the river corridor, and the continuity provided by the river are significant. The "story" of the Eno cannot be adequately told by isolating particular sites; rather, events and places must be described in terms of their relation to the history of the Eno in its entirety.

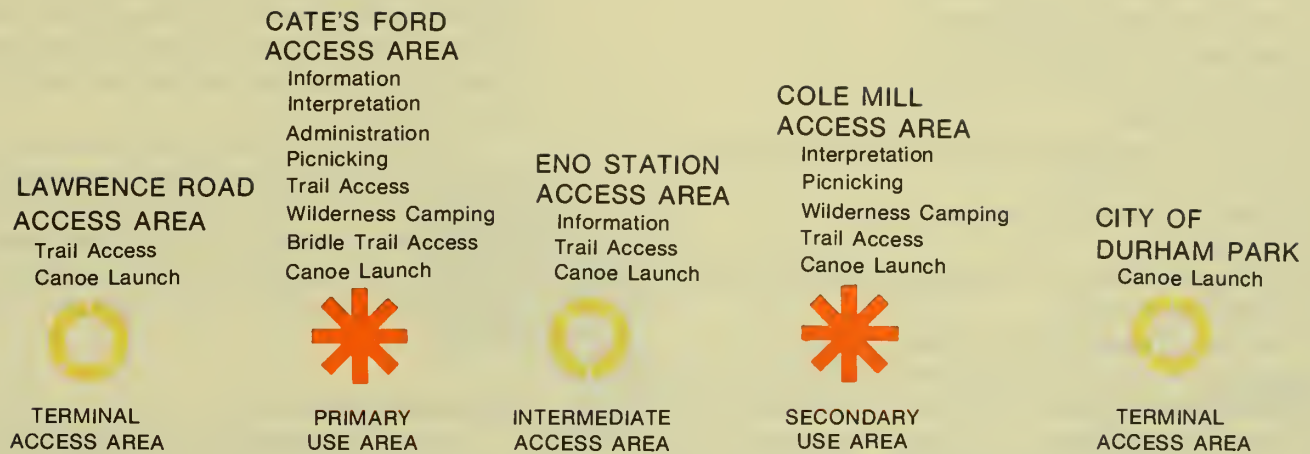
The concept for park design is based on the perception of the river as a linear resource and naturally results in a plan for decentralized public access. The establishment of a policy and specific mechanisms aimed at protecting the physical resource — the river corridor — is very important. The overriding theme for park design is based on this need for resource protection

and dictates two fundamental criteria; first, that the park as a whole should provide for only low-intensity usage and maintain a wilderness character as nearly as possible, and second, that sites determined to be of particular significance for their natural or cultural heritage should be managed for permanent protection. Public access will be allowed at points along the river which satisfy requirements of site suitability, access, ownership, and safety, where past use dictates a demand for public access and management, and where locations for public access are required based on a conceptual use program.

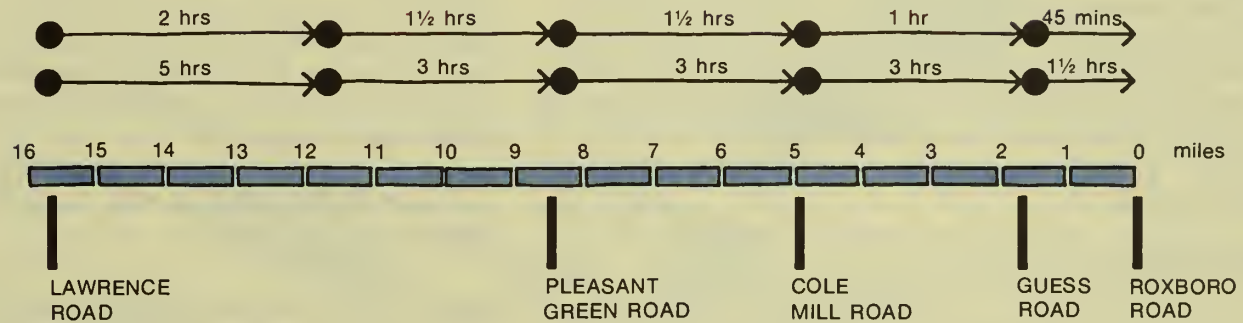
Two types of recreational use are of primary importance. The first is "movement-oriented" use, such as hiking, canoeing, rafting, and horseback riding, along the river corridor. This is basic to the river park concept in that it, too, is linear in nature. The second is the interpretation of the Eno's natural and cultural history, an activity which, though carried out on several separate sites, will always be approached in the context of the river corridor as a whole.

The movement-oriented activities are related by time-distance factors — in other words, the relative times and distances involved in moving from one point to another. Each of these activities can be analyzed in this way, the result being a distribution of starting/stopping points for each activity and their relationship to the other movement-oriented activities. Recreational activities such as picnicking and camping are secondary in importance and will act as support facilities located at the public access areas only where essential.





EXISTING USE PROGRAM  
Canoeing  
Floating



The carrying capacities for these secondary activities are:

**Family Wilderness Camping Areas**

10 sites/camping area — 2 tents/site

3.29 sites/hectare (1.33 sites/acre)

(min. 60 meter [200'] radius site)

**Group Wilderness Camping Area**

12 sites/camping area — 1 tent/site

**Family Picnicking Area**

40 tables @ 20 tables per hectare (8 tables per acre) —

2 hectares — (5 acres)

1/2 hectare (1 acre) informal open space

**Group Picnicking Area**

12 tables @ 40 tables per hectare (16 tables per acre) —

1/3 hectare (3/4 acre)

1/4 hectare (1/2 acre) informal open space

The concept of phased development is basic to the park plan. In keeping with policies developed by Orange County with respect to the Eno River State Park, the first phase of the Eno River State Park will utilize only those lands presently in State ownership. As a result, purchase of additional land will not be required prior to Phase I implementation. After Phase I implementation, acquisition of property necessary to fulfill a final park plan should begin. Phase II consists of implementing the final design program and initiating a program to secure permanent protection of the river corridor on those lands linking public access points.

## **MASTER PLAN**

### **PHASE I**

The main objective of Phase I is the utilization of existing park land for the provision of interim or temporary park facilities. The Cate's Ford Access and Cole Mill Road Access are main points of public access where both primary and support facilities will be provided.

#### **Cates Ford Access**

The existing entrance into the Cate's Ford Access via the Cole Mill Road extension will be utilized by the public. The existing building, presently serving as a park office, will continue

as such and the parking area nearby, serving 30 cars, will be maintained. Visitor information will be available at the park office and access to other points in the area will be from this parking lot. Hiking trails will cross the river by way of the cable/raft crossing located near the O'Briant cabin west of the park office. A second raft crossing located near the mouth of Buckquarter Creek will provide trail access into the Shaw tract north of the park office.

A family picnic area overlooking the river will be located due west of the office, and a group camp for day use and overnight tent camping will center around the O'Briant cabin. Additionally, a ten-site family wilderness camp, accessible by trail from the park office and by canoe from upstream, will be located on a plateau on the south bank of the river on the old Shaw tract.

#### **Cole Mill Road Access**

Phase I development at Cole Mill Road will consist of the establishment of a twenty-two car parking lot along the old Cole Mill Road right-of-way, an information station, and a canoe launch. Loop hiking trails will emanate from the information station. Family and group picnicking facilities will be provided near the parking area. Also, a wilderness camp will be located on a small ridge overlooking the river within eight tenths of a kilometer (one half mile) hiking distance from the parking area. The camp will otherwise be accessible by canoeists from upstream.

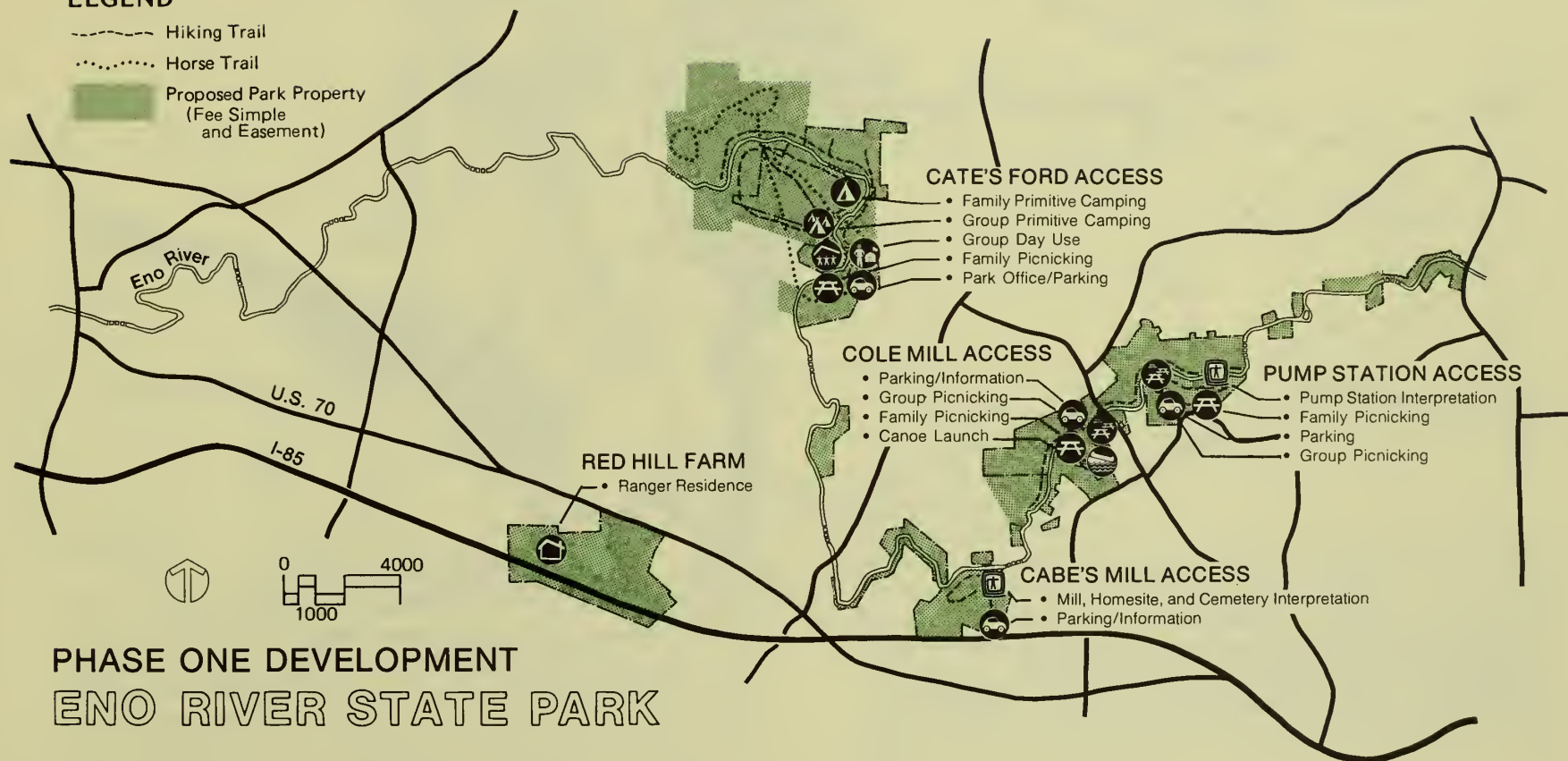
#### **Cabe's Mill and Pump Station Access Areas**

Two minor access points will be available to the public during Phase I, although they will not include the support facilities. These points are the Cabe's Mill Access and Pump Station Access. Both sites will be provided with small parking areas, accessible from Sparger Road and Rivermont Drive respectively, and will contain interpretive stations at the entrance to the marked self-guided trails. These areas are both isolated with respect to other types of park activities and are intended only for short-term hiking and interpretation.






## LEGEND

- Hiking Trail
- ..... Horse Trail
- Proposed Park Property  
(Fee Simple  
and Easement)



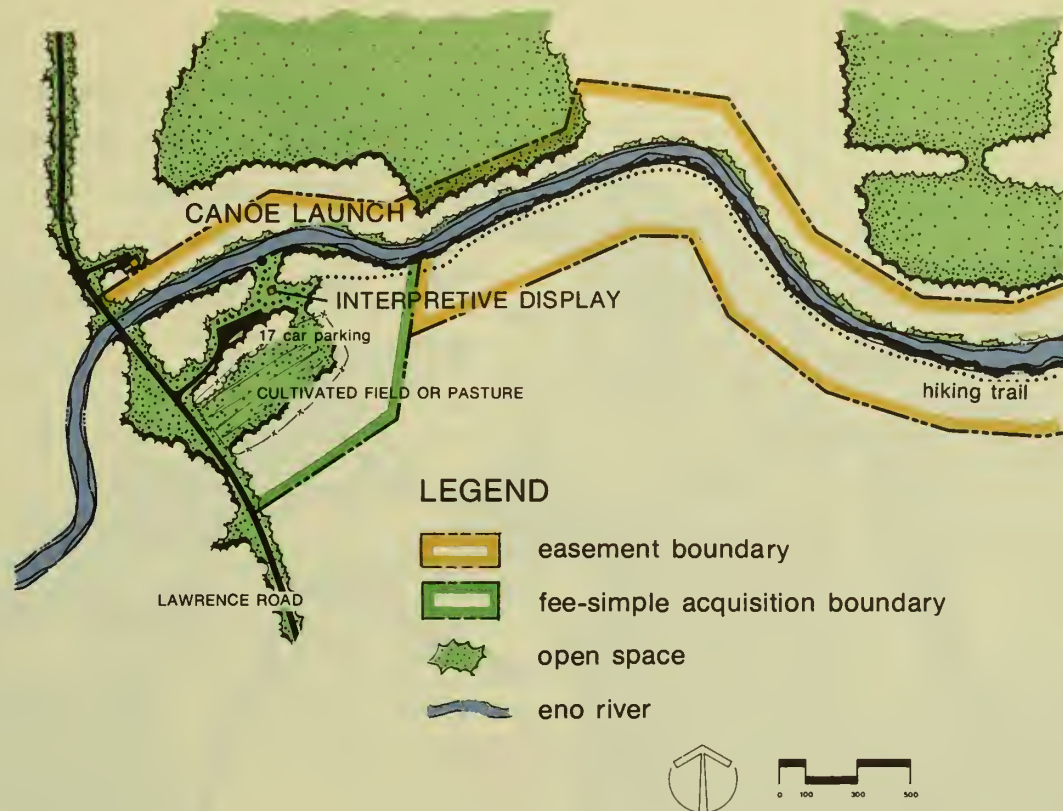
## LEGEND

-  Hiking Trail
-  Horse Trail
-  Proposed Park Property  
(Fee Simple  
and Easement)



## PHASE TWO DEVELOPMENT ENO RIVER STATE PARK





LAWRENCE ROAD ACCESS AREA

## PHASE II

The second phase of development for the park will begin with acquisition of that land necessary for the implementation of the final design program at Cate's Ford, Cole Mill Road, Cabe's Mill, Pump Station, Eno Station, and the Lawrence Road Access Areas. This land acquisition will be by fee-simple title purchase or donation and will total approximately 510 hectares (1260 acres). Additionally, conservation easements linking the Pump Station Access and Eno Station Access will be acquired.






Also proposed in Phase II is the deletion of the Red Hill Farm tract. Funds or interest accrued as a result of its release will be applied to the acquisition of other high priority land to be included in the Eno River State Park.

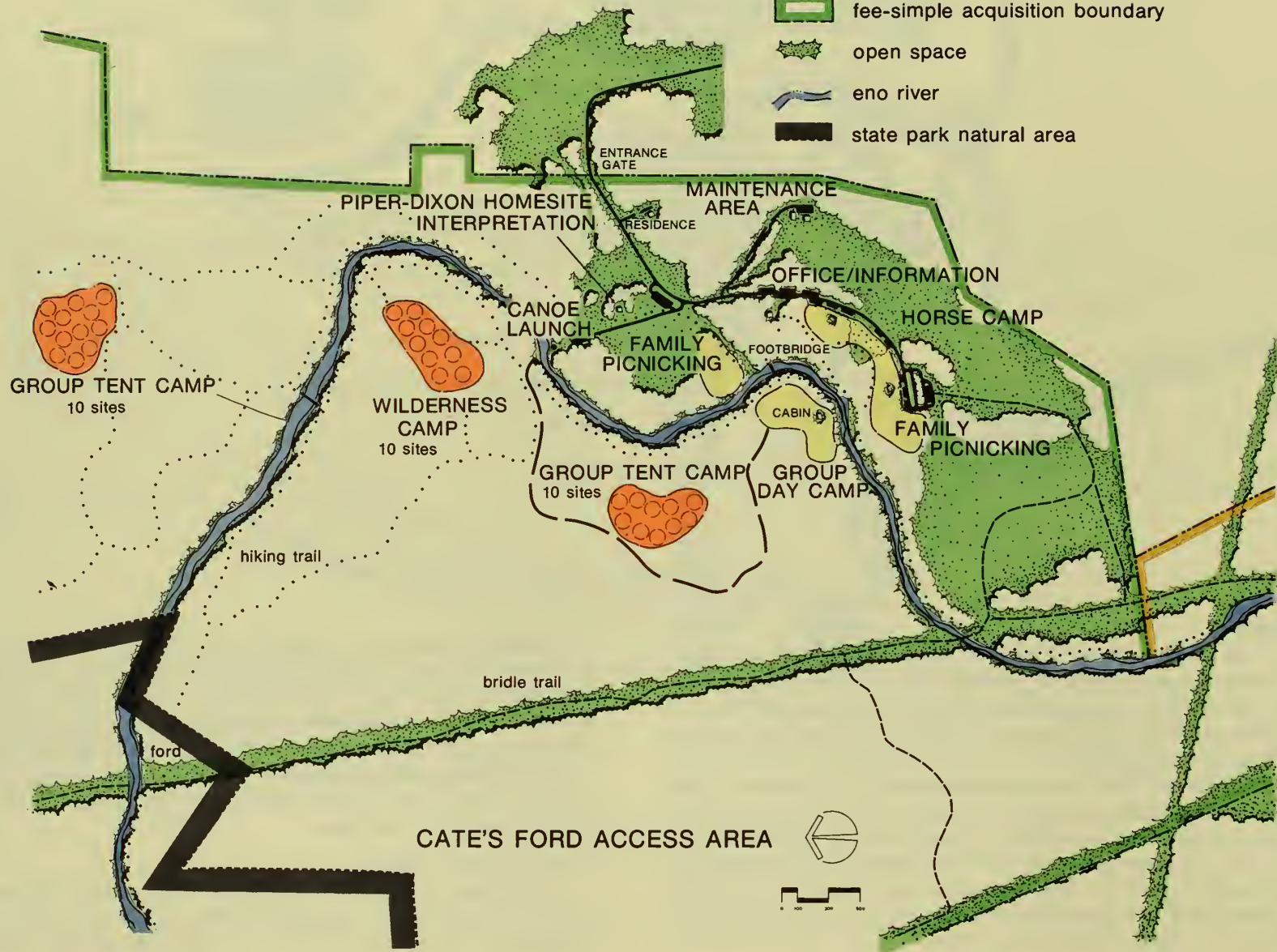
Phase II calls for the development of final program facilities at Lawrence Road, Cate's Ford, Eno Station, Cole Mill Road, Cabe's Mill, and Pump Station Access Areas. The program which is considered maximum development, should not be expanded, and should not be implemented until study indicates it is appropriate. Planning trends realized at other N.C. State Parks indicate that implementation of this program should begin in one to three years.

### Lawrence Road Access

The development of the Lawrence Road Access consists of a small parking area, accessible from Lawrence Road and a canoe launch. A hiking trail link to downstream will be provided.

# LEGEND

-  easement boundary
-  fee-simple acquisition boundary
-  open space
-  eno river
-  state park natural area





### **Cate's Ford Access**

The Cate's Ford Access Area will expand in the second phase as a result of the acquisition of nearly 420 hectares (1040 acres) of land. Upon acquisition of the land immediately east of Cate's Ford, the park entrance gate will relocate to a position on the Cole Mill Road extension about 600 meters (2,000 feet) from the intersection of Cole Mill Road and Pleasant Green Road. The entrance road will remain gravel.

The historic Piper-Dixon house is included on this land to be acquired. Because of the unusual attraction felt by most who have visited this site, plans have been developed for a sensitive treatment focusing on preservation and interpretation of those features giving the site its character. These include the traditional hedge-rows, the grape arbor, the fruit and nut bearing trees, the old garden plot, the traditional yard, fence and gates, as well as the house.

Proposals for the house include removal of portions of the old cabin, stabilization of foundation walls and chimney, and stabilization of the newer portion of the house with reconstruction where safety demands. The half of the house located on the riverside will be modified to serve as an interpretive display area. Exhibits will include information on the Piper-Dixon house specifically, and farmsteads along the Eno in general.

This site and its heritage of man's balanced dependence on the river are representative of the landscape character projected by the entire park. Therefore, a stylized image of the house is proposed for all major signs associated with the park.

After entering the park, visitors will have the option of stopping at the Piper-Dixon house or continuing on to the day use area. A twenty car, two bus parking lot will be provided near the Piper-Dixon house. From this point, the main hiking and interpretive trail system will emanate north along the bluffs of Cate's Ford and into the old Shaw property towards Buckquarter Creek.

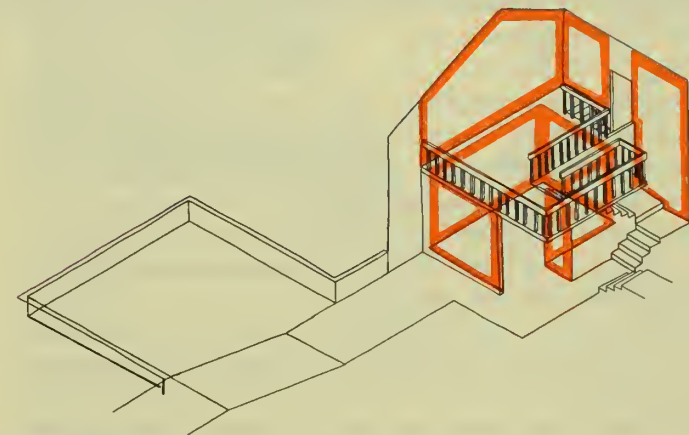
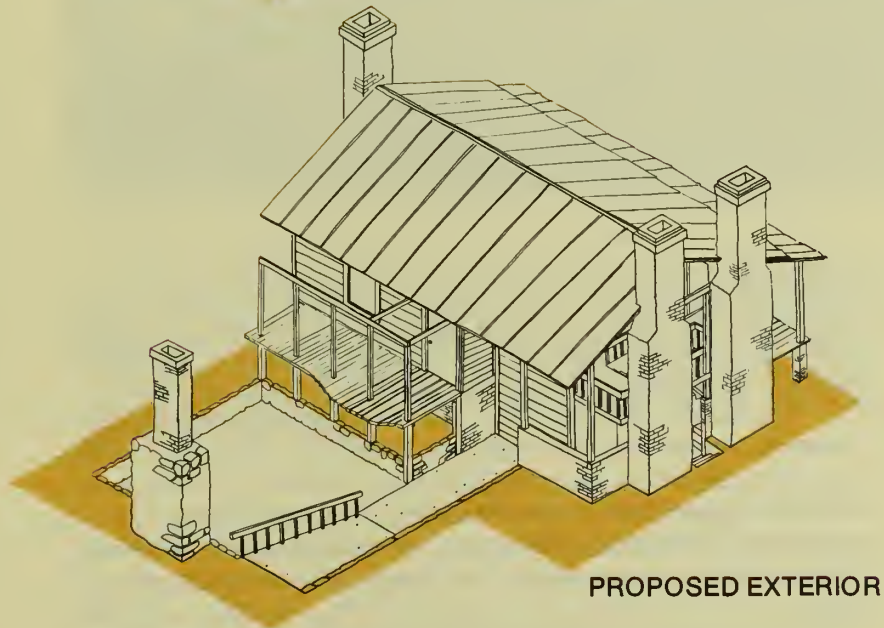
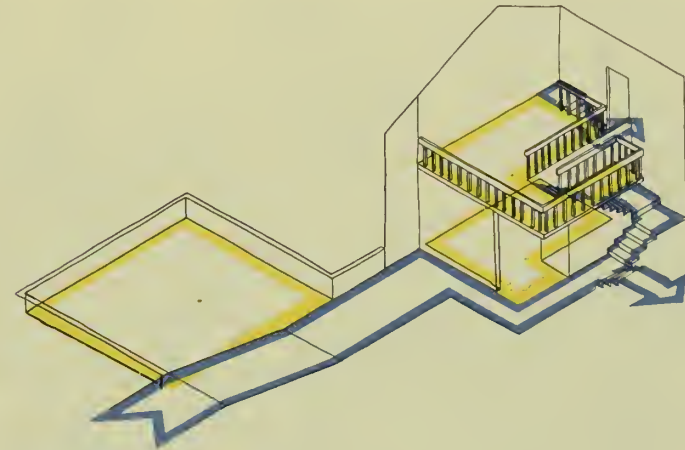
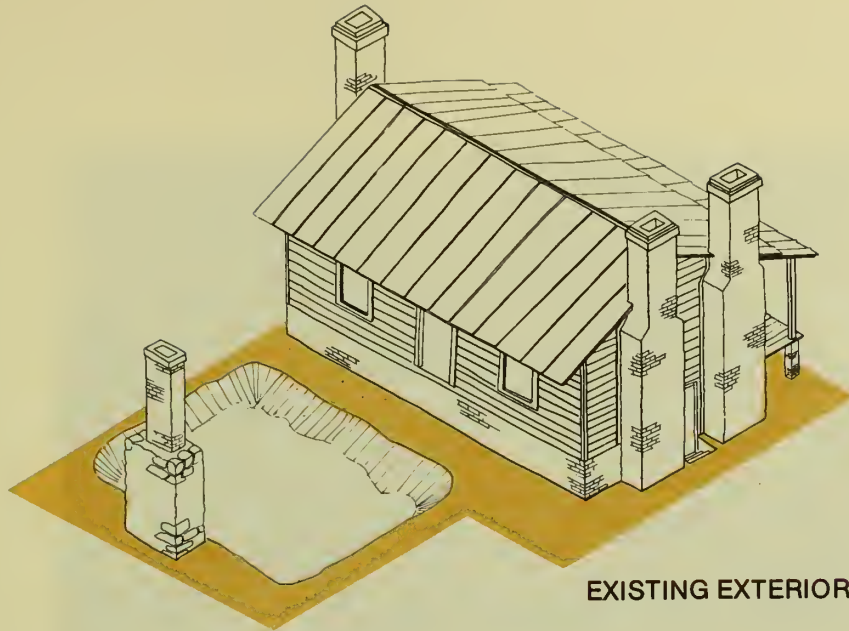


PIPER-DIXON HOUSE, *Jerome C. Friar*





# PIPER DIXON HOUSE INTERPRETATION





PIPER DIXON HOUSE, *Jerome C. Friar*

Utilizing the existing gravel road leading past the Piper-Dixon home to the ford, a spur road will be opened and a small parking area provided for the exclusive use of canoeists. The ford will become the permanent site for a canoe launch and landing. Opposite the Piper-Dixon house, in a wooded area near the new entrance gate, a new ranger residence will be located to provide protection for this use area.

Continuing along the entrance road, past the Piper-Dixon house and canoe launch, the visitor will arrive at the new park office and day use area. The access road will be realigned as it enters this area to fall along the existing tree line about thirty meters (one hundred feet) back from the top of the bluff. The park office will provide administrative space for the park

superintendent and will be the site for distribution of general information about the park. Parking for five visitor cars and three park staff vehicles will be provided at the office, with additional parking for wilderness campers provided across the road.

The existing park office will be converted to serve as a park maintenance center. A warehouse/workshop and yard will be located adjacent to the office building.

Just beyond the new office site, family picnicking will be expanded beyond that provided in Phase I. Parking will be added along the access road in the vicinity of the additional picnic sites.

The access road will continue, terminating at an additional parking area which will serve a second family picnic area over-



looking the river. Between these two picnicking sites, a three quarter hectare (two acre) open space will be maintained.

A short spur road off the final picnicking area will lead bridle trail users to the designated horse camp. The camp will consist of a small parking area for vehicles and trailers and tie racks. The bridle trail system, which begins at this point, is about eleven kilometers (seven miles) in length within the Cate's Ford Area alone.

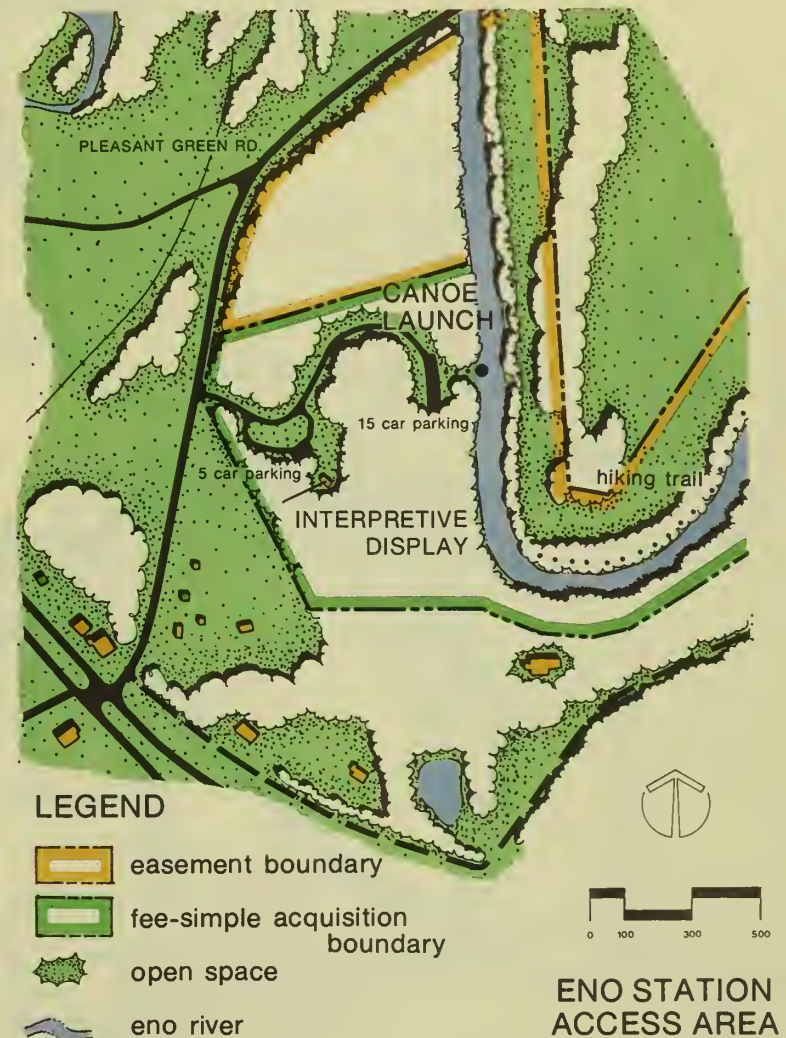
Hiking trails will lead from the family picnic areas to the river where a permanent footbridge will be located about ninety meters (one hundred yards) north of the existing cable-type crossing. The hiking trails will run parallel to the river, north, and into the Shaw and soon-to-be-acquired Knight and Rhine tracts. The total length of hiking trails within this area will be about thirteen kilometers (eight miles).

The group camp areas designated in Phase I will be expanded to accommodate a relocated group tent area consisting of ten hike-in sites. A second group camp area also with ten sites will be established north of Cate's Ford on the eastern bank of the river. The wilderness camping area established in Phase I for overnight use by hikers and canoeists will not be expanded and will remain in its present location.

A Park Natural Area, containing all the land known as the Rhine tract, will be designated within the Cate's Ford Access Area. This land has remained relatively undisturbed and contains outstanding examples of native plant communities plus a unique physiographic make-up. Development within this area will be limited to trails.

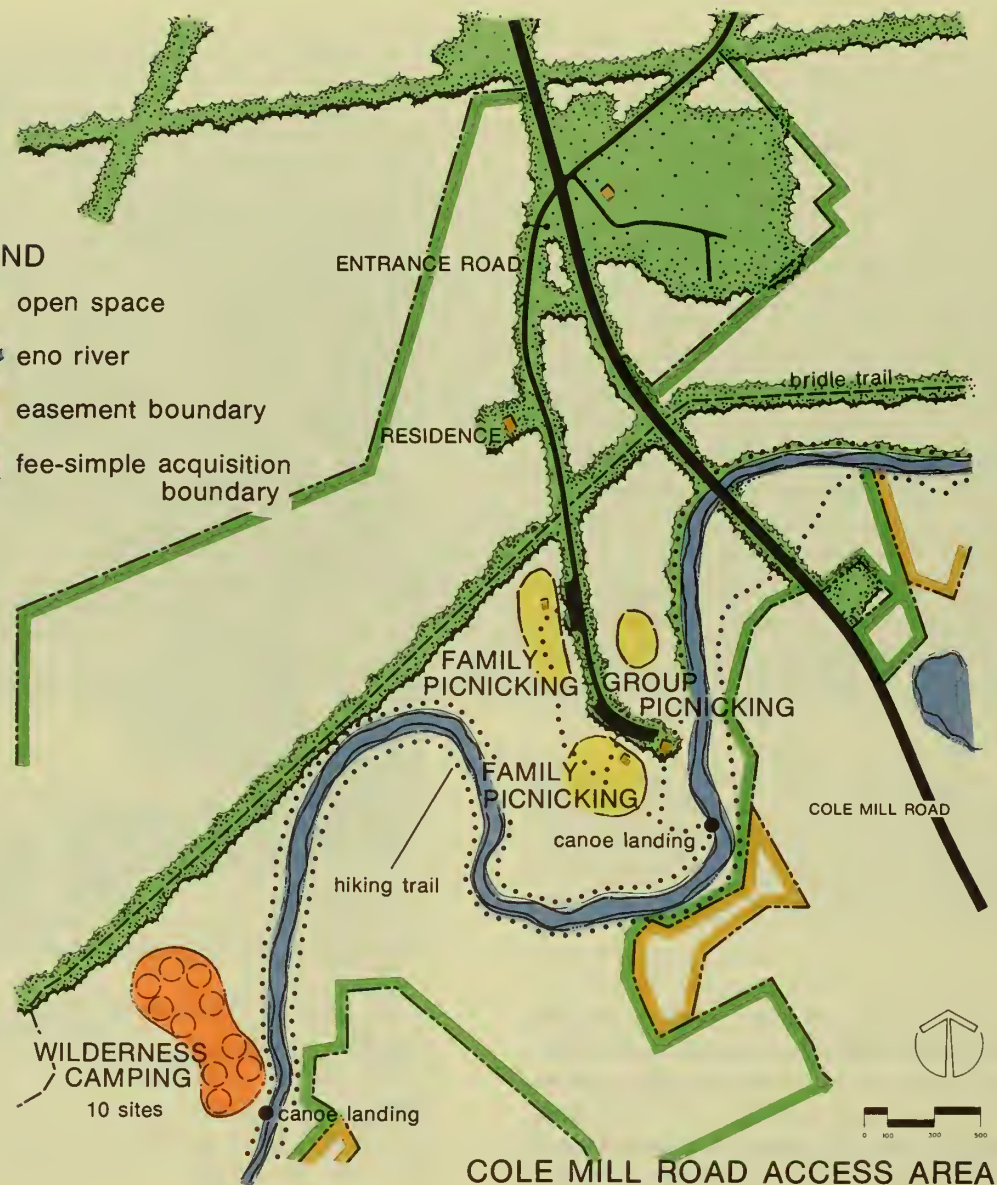
#### Eno Station Access

Phase II calls for the development of final program facilities at Eno Station, adjacent to the Pleasant Green Road river crossing. Approximately five and one half hectares (fourteen acres) will be acquired at this site which will contain a small parking area, accessible from Pleasant Green Road, and a related information station. The Eno Station site will provide canoe



# LEGEND

- open space
- eno river
- easement boundary
- fee-simple acquisition boundary





launching and landing as well as access to the river for fishermen.

### Cole Mill Access

At the Cole Mill Road Access, the parking area will be expanded to include an additional thirty spaces. As a result, the existing picnic area will be enlarged and a second smaller family picnic area will be developed. A total of twenty family picnic sites will be provided. The group facility established in Phase I will be maintained.

With the acquisition of about twenty six hectares (sixty five acres) near Bobbitt Hole, the wilderness camp designated in Phase I will be relocated. The wilderness camp will be expanded to provide ten sites located on a broad ridge between Bobbitt Hole and the day use facilities. A canoe landing will be provided in close proximity to the camping area for use by canoeists on overnight trips.

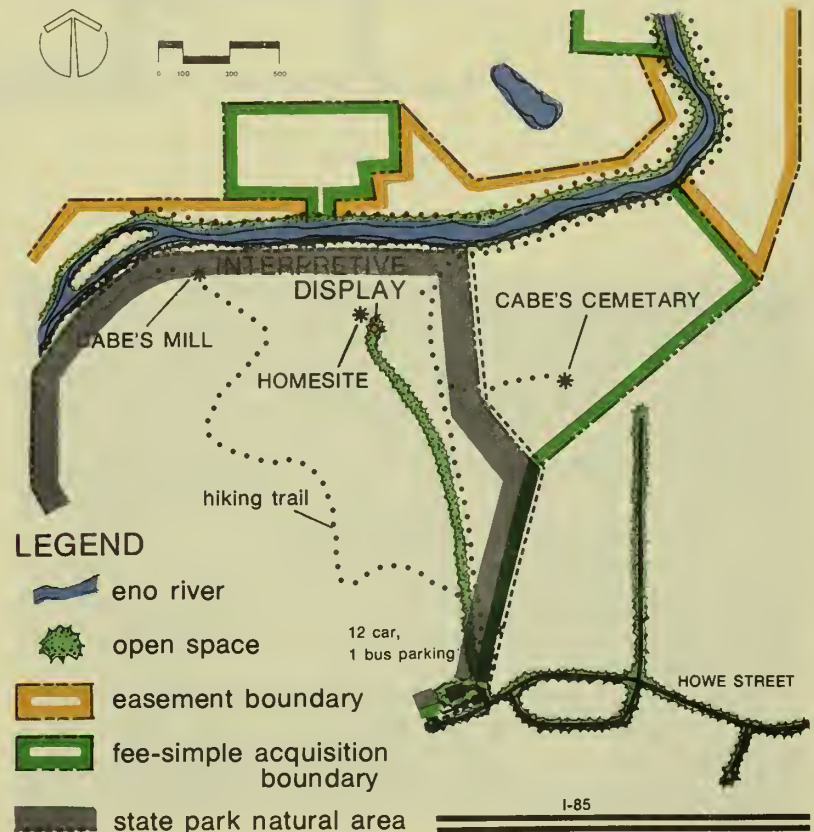
The information station provided in Phase I will remain. While it will continue to operate primarily as a self-contained facility, the structure will be designed to include a small office space which can be secured and operate as a ranger station during peak periods. The canoe launch and landing established in Phase I will remain.

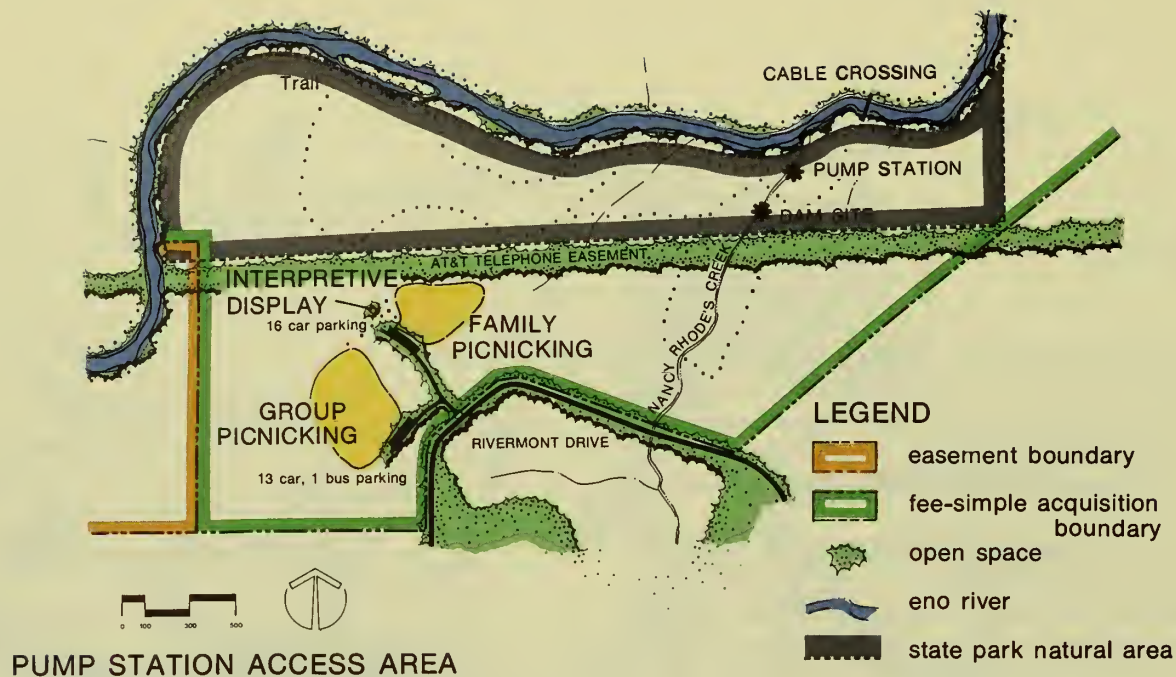
### Cabe's Mill Access

The Cabe's Mill Access will be altered only to the extent of providing an expanded interpretive trail, resulting from new fee-simple acquisition. The purpose of this area will be exclusively that of interpretation of the old mill site and Cabe family cemetery and to provide an access for fishermen.

In this phase, all of the land associated with the Cabe Mill Access will be designated a Park Natural Area. The use of the land for interpretation and trails will not conflict with this designation.

### CABES MILL ACCESS AREA





### Pump Station Access

Phase II development at the Pump Station will include the establishment of a group day use area which will operate on a reservation basis. A thirteen car, one-bus parking area will be provided separate from the sixteen spaces established in Phase I. A group picnicking area consisting of twelve clustered tables, toilet building, and small open space will be located on the high ground between Rivermont Drive and the river.

The sixteen car parking area and related interpretive station and loop trails will remain for day users. The purpose of this facility is identical to that of the Cabe's Mill Access (ie: for hikers and fishermen).

The portion of the Pump House Access area north of the power line easement will be designated one of three Eno River State Park Natural Areas. Unique botanical features warrant this designation and continued use of interpretive trails will be compatible.

Also included in this phase are the acquisitions of the final proposed fee-simple holdings for the park. Approximately one hundred twenty hectares (three hundred acres) of additional woodland to be included as part of the Cabe's Ford "Wilderness" area will make up this acquisition. This land will provide a significant addition to the park's forest land as it will include the area known as "Million-Dollar Valley" and the upper portion of Buckwater Creek.

Phase II will also include the acquisition of the remaining conservation easements extending east from the Cabe's Ford Area to Guess Road, the point where the State Park joins the Durham City Park. These easements will act to link all the fee-simple owned land and previously acquired easements so that the park becomes a continuous corridor of land along the river. The primary purpose of the easements is to insure the permanent protection of the land adjacent to the river which is not included in the park's fee-simple ownership. Conservation ease-



ments west of the Cate's Ford area will also be acquired. These easements are required primarily for the purpose of insuring permanent protection of the river corridor as far west as Lawrence Road. All easement agreements will be written to provide this assurance.

Phase II will be completed by the establishment of trails through the majority of the easement properties in order to provide hiking and horseback riding as linkages between the Access Areas in addition to canoeing. In the area between Cate's Ford and Guess Road, the only portion of the corridor lacking trails is on the south and west side of the river between the Cate's Ford Access and the Cabe's Mill Access. This is due to the extremely steep bluffs on the north facing banks of the river immediately downstream from the Pleasant Green Road bridge and the existence of private residences within only a few feet of the river bank at the Brigadoon subdivision. Trails will be established on the south side of the river west of the Cate's Ford Access Area.



INTERPRETIVE HIKE, *Brenda Williams*

## DEVELOPMENT PROGRAM

	Developed Area in hectares (acres)	People Per Day		Developed Area in hectares (acres)	People Per Day
<b>PHASE I</b>					
<b>Objective</b>					
Utilization of acreage for provision of of interim facilities at Cate's Ford Access, Cole Mill Road Access, Cabe's Mill Access and Pump Station Access Areas.			Group Tent Camp 5 sites 1 pit privy parking 5 visitors	.8 (2.0)	20
<b>Cate's Ford Access Area</b>			<b>Cabe's Mill Access Area</b>		
Day Use:			Interpretive Station self-contained display, trailmarkers 1 pit privy parking 10 visitors, 2 staff 1 bus	.4 (1.0)	240
Park Office/Maintenance Building information, workshop, work yard and fuel pumps parking — 4 staff	.3 (.75)		Trails hiking — 2,065 meters (5,100 feet)		
Family Picnicking 10 tables 1 pit privy parking 10 visitors	.6 (1.5)	80	<b>Cole Mill Road Access Area</b>		
Group Day camp existing cabin 6 picnic tables open space 2 pit privies parking 12 visitor, 2 bus	1.2(3.0)	100	Day Use:		
River Crossings 2 cable type raft			Interpretive Station display parking 2 staff	.1 (.25)	
Trails hiking — 5,500 meters (18,000 feet)			Family Picnicking Area 6 tables 1 pit privy parking 6 visitors	.6 (1.5)	48
Overnight Use:			Group Picnicking Area 3 tables 1 pit privy parking 3 visitors	.12 (.3)	48
Family Wilderness Camp 10 sites 1 pit privy Canoe Landing parking 10 vistors	4.1 (10.1)	40	Canoe Launch and Landing parking 6 visitors	.04 (.1)	48
			Overnight Use:		
			Family Wilderness Camp 5 sites 1 pit privy 1 canoe landing parking 5 visitors	2.0 (5.0)	20



	Developed Area in hectares (acres)	People Per Day		Developed Area in hectares (acres)	People Per Day
<b>Pump Station Access Area</b>			<b>Maintenance Area</b>		
Interpretive Station			conversion of existing office to		
self-contained display,			workshop garage, warehouse,		
trail-markers			work yard and fuel pumps	.3 (.75)	
parking 15 visitor, 1 staff	.6 (1.5)	120	<b>Family Picnicking Area</b>		
Trails			35 tables		
hiking— 2075 meters (6,800 feet)			2 toilet buildings		
			maintained open space		
			parking 35 visitors, 4 staff	2.4 (6.00)	280
<b>PHASE II (CUMULATIVE)</b>			<b>Group Day Camp</b>		
<b>Objectives</b>			existing cabin, 1 pit toilet		
Acquire land in fee-simple necessary			6 picnic tables		
for implementation of final pro-			open space		
grams on all park access areas.			parking 12 visitor 2 bus		
Deletion of Red Hill tract.			(@ Family Picnic Area)	1.2 (3.0)	128
Provision of final program			<b>Bridle Trail Loading Area</b>		
facilities at:			information, 20 tie racks		
Lawrence Road Access,			parking 10 car/trailer spaces	.08 (.5)	40
Cate's Ford Access			<b>River Crossings</b>		
Cole Mill Road Access,			1 footbridge		
Eno Station Access and			1 cable-type raft		
Pump Station Access Areas.			<b>Trails</b>		
Acquire connecting conservation			hiking — 15,700 meters		
easements with trail access.			(51,500 feet)		
Acquire connecting conservation			bridle — 15,100 meters		
easements without trail access.			(49,500 feet)		
<b>Lawrence Road Access Area</b>			<b>Access Road — 1,200 meters</b>		
Information station			(4,000 feet)		
display, pit toilet	.08 (.2)		<b>Overnight Use:</b>		
Canoe launch/landing			<b>Family Wilderness Camp</b>		
parking 15 visitor, 2 staff			10 sites (5 existing, 5 proposed)		
access road — 90 meters (300 feet)	.04 (.1)	120	10 pit toilet, parking 10 visitors		
			(near park office)	4.1 (10.1)	40
<b>Cate's Ford Access Area</b>			<b>Group Tent Camp</b>		
Day Use:			10 sites (5 existing, 5 proposed)		
Piper-Dixon House Interpretation			pit toilet, parking 10 visitors		
information, display			(near park office)	1.6 (4.0)	40
parking 20 visitor, 2 bus, 2 staff	1.2 (3.0)	640	<b>Group Tent Camp</b>		
Canoe Launch/Landing			10 sites (10 proposed)		
parking 10 visitors	.04 (.1)	80	pit toilet, parking 10 visitors		
Ranger Residence	.1 (.25)		(near park office)	1.6 (4.0)	40
Park Office					
new office building					
parking 5 visitors, 3 staff	.2 (.5)	160			







	Developed Area in hectares (acres)	People Per Day
<b>Eno Station Access Area</b>		
Information station display, office, toilet parking visitor, 2 staff	.08 (.2)	
Canoe launch/landing parking 10 visitor	.04 (.1)	80
Access Road — 325 meters (1,025 feet)		
<b>Cabe's Mill Access Area</b>		
Interpretive Station Self-contained display, pit toilet parking 10 visitor, 2 staff, 1 bus	.08 (.2)	240
River crossings 1 cable type raft		
Trail Hiking — 1,650 meters (5,400 feet)		
Access Road — 330 meters (1,075 feet)		
<b>Cole Mill Road Access Area</b>		
Day Use:		
Information Station display, office parking 2 staff	.1 (.25)	
Ranger Residence	.1 (.25)	
Family Picnicking Area 20 tables, 2 pit toilets open space parking 20 visitor	1.8 (4.5)	160
Group Picnicking Area 5 tables, parking, 10 visitors	.2 (.5)	80
Canoe Launch/Landing parking, 10 visitor	.04 (.1)	80
River Crossings 1 table type raft		
Trails hiking — 9,270 meters (30,400 feet) bridle — 3,050 meters (10,000 feet)		

	Developed Area in hectares (acres)	People Per Day
Access Road — 850 meters (2,800 feet)		
Overnight Use:		
Family Wilderness Camp 10 sites, 1 pit toilet parking 10 visitors	4.1 (10.1)	40
<b>Pump Station Access Area</b>		
Interpretive station self-contained display	.1 (.25)	
Family Picnicking Area 15 tables, 1 pit toilet parking 15 visitor, 1 staff	.9 (2.25)	120
Group Day Camp 12 picnic tables, 1 pit toilet open space parking 12 visitor, 1 bus, 1 staff	1.2 (3.0)	100
River Crossings 1 cable type raft		
Trail Hiking — 2,075 meters (6,800 feet)		
Access road — 330 meters (1,075 feet)		
<b>TOTAL</b>		
Day Use:		
Family Picnic Tables—70		
Group Picnic Tables—23		
Trails		
Hiking — 45 kilometers (28 miles)		
Bridle — 27 kilometers (17 miles)		
Canoeing — 22 kilometers (14 miles)		
Access Road — 3.6 kilometers (2.25 miles)		
Overnight Use:		
Family Wilderness — 20 sites		
Group Tent Camp — 20 sites		





## PROJECTED PARK USE

The projected annual visitation for Eno River State Park is 230,000 people. This figure represents visitation after major use facilities in the park have been provided. Long-range projections predict an additional average annual increase of about 1.6% based on current North Carolina State Park System trends.

The design capacity of the park is 2,300 visitors in any one day, although this number is anticipated only on major spring and summer holidays and peak week-ends. Naturally, fluctuations in weather conditions can have a profound effect on potential park visitation in any one day. The cost and availability of gasoline may also affect future use, possibly causing major changes in demand and use patterns.

Following is a breakdown of projected annual visitation for each of the proposed park access areas, based on the final development program:

Access Area	Projected Annual Use
Lawrence Road	12,000
Cate's Ford	117,900
Eno Station	10,000
Cabe's Mill	24,000
Cole Mill Road	39,500
Pump Station	23,500
(linking hiking and bridle trails)	<u>3,100</u>
	230,000

## SERVICES TO PARK USERS

Programs relating to park security, visitor protection, and fire protection will be based at the Cate's Ford and Cole Mill Road Access Areas, where permanent staff will be located. Patrol of the Eno Station and Lawrence Road Access Areas will occur from Cate's Ford. Patrol of the Cabe's Mill and Pump Sta-

tion access areas will be from Cole Mill Road. Park patrolling will be by foot, on horseback, and in mobile units equipped with two-way radios.

The North Carolina Forest Service develops fire protection plans for State Park areas. At the Eno River State Park, fire protection is a responsibility which will be shared by park staff and the forest service field office, located on N.C. 86 south of Hillsborough. The Eno volunteer Fire Department, located on U.S. 70 opposite Eno Station, has indicated its willingness to extend services to the park where access for its vehicles permits. In emergencies other resources including the National Guard are available. As an additional measure of protection, small caches of firefighting equipment will be located at the Information or Interpretive stations at each access area for use on small fires. First aid equipment will also be provided at these same points for emergency use.

Information services tailored to specific needs will be available at each proposed access area. The information stations proposed at the Cole Mill Road, Eno Station, and Lawrence Road Access Areas will be primarily self-contained units providing both general park information and specific interpretive data. The Park Office will serve the information function at Cate's Ford.

As the park develops, park use increases, and gasoline costs rise, initiation of a bus service providing transport to and from the park's access areas may become desirable. Such a service would be intended particularly for long-distance users such as hikers and canoeists. Initially, the service could operate exclusively between the Cate's Ford and Cole Mill Road Areas. As feasibility studies dictate, the service could be later expanded to incorporate other access areas. As municipal bus services expand, incorporation of the park access points into the city's bus routes may be appropriate.

## LAND ACQUISITION

The phasing and policies for land acquisition at the Eno River State Park are rather complex, involving several types of agreements and more than 116 individual land owners. As a result of suggestions formalized by the Orange County Commissioners and otherwise voiced by private citizens, the approach to the land acquisition plan is being based on an effort to be responsible to County policies and at the same time, remain consistent with State objectives.

The schedule for land acquisition, described in the following outline, is broken into easement or fee-simple interest, and geographic location.

### Phase I

No additional land acquisition

### Phase II

#### Fee Simple Acquisition

	Hectares	Acres
Lawrence Road Access	6.1	15.0
Cate's Ford Access	420.5	1,039.0
Eno Station Access	5.7	14.0
Cabe's Mill Access	8.5	21.0
Cole Mill Road Access	44.9	111.0
Pump Station Access	25.1	62.0
Other	7.7	19.0
Total	518.59	1,281.0



<b>Conservation easement</b>		
(from Lawrence Road Access to Cate's Ford Access)		
north bank (without trail access)	16.2	40
south bank (with trail access)	19.0	47
(subtotal)	35.2	87
(from Cate's Ford Access to Eno Station Access)		
north bank (with trail access)	45.3	112
south bank (without trail access)	19.4	48
(subtotal)	64.7	160
(from Eno Station Access to Cole Mill Access)		
north bank (with trail access)	16.2	40
south bank (with trail access)	7.3	18
(subtotal)	23.5	68
(from Cole Mill Access to Guess Road)		
north bank (with trail access)	5.3	13
south bank (with trail access)	20.6	51
(subtotal)	25.9	64
<b>Summary of Land Acquisition</b>		
Existing Ownership	645	1,593.0
Proposed Fee Simple	518.59	1,281.0
Proposed Easement With Trail Access	113.7	281
Proposed Easement Without Trail Access	35.6	88.0
	1,312.8	3,243.0
Proposed Deletions		
Final Proposed Acreage	133.5	330.0
	1,179.3	2,913.0
Total River Length of State Park — 22.2 kilometers (13.8 miles)		

Land acquisition activity begins with an effort to acquire all properties in fee simple where park facilities will be developed or, otherwise, where protection of a principal feature is required. Normal Division policies will be applied in the approach to acquiring title to these properties.

The acquisition of conservation easements along the river corridor will be distinguished between those acquired with access rights and those acquired without access rights. For those requiring access, normal Division policies toward land acquisition will be applied. It may prove that the cost of acquiring easements with access is near the actual purchase price of the property, in which case fee title would be sought. In these situations, scenic criteria — the line of sight distance — will be applied to determine easement width in most cases.

In case of conservation easements without trail access, which will occur extensively in Orange County, strictly conservation-oriented criteria have been applied to determine the width of necessary easements. It is expected that current uses of these lands, including agricultural, will continue. But the Department of Administration will not yield its right to acquire land by eminent domain in those instances where owners fail to adhere to stated easement restrictions.

A method for determining desirable widths for conservation easements was developed for application along the Eno River. The variables assessed as part of the methodology include (1) soil erodibility (based on SCS soil erodibility factors), (2) percentage slope, and (3) relative intensity of adjacent land uses (directly correlated with rainfall runoff characteristics). A standard 150-meter (500-foot) setback was used in evaluating these factors. The purpose of such an easement is to provide some measure of protection for both water quality and scenic quality in areas along the river which have undergone some degree of development.

## UTILITIES

The decentralization of park use areas requires a site-by-site approach to the development of a utility plan. While some areas may be serviceable by public utilities in the near future, others will not be, and will therefore need to rely on separate systems.

In particular, the Cabe's Mill area, Cole Mill Road area, and Pump Station area are all within close proximity to the proposed City of Durham's public water and sewer lines. Particularly the Cole Mill and Pump Station areas should make use of these services when they become available, provided utility river crossings and the like are not required. Since the Cabe's Mill area is designed for limited use, it is not essential that this area be incorporated into the system.

The greater isolation of the Lawrence Road area, Eno Station area, and Cate's Ford area, from municipal services will necessitate reliance on self-contained systems. In these cases, drilled wells and septic tanks are likely to be the most feasible means of water and sewer service.

Utility requirements for the park use areas for potable water, electrical and toilet facilities, according to the completed plan are as follows:

### Lawrence Road Access Area

Water — 1 drinking fountain

Toilets — 1 pit toilet

Electrical service and telephone required

### Cate's Ford Access Area

#### Piper Dixon House

Water — 640 persons @ 28 liters (7.5 gal)/person,  
17,920 liters (4,800 gal)/day

Toilets — (men) 3 toilets, 2 urinals, 3 lavatories  
(women) 4 toilets, 3 lavatories

Electrical service and telephone required

### Ranger Residence

Water — 4 persons @ 19 liters (5.0 gal)/person,  
76 liters (200 gal)/day

Toilets, electrical service and telephone required

### Park Office

Water — 160 persons @ 28 liters (7.5 gal)/person,  
4,480 liters (1,200 gal)/day

Toilets — 2 toilets, 2 lavatories

Electrical service and telephone required

### Maintenance Area

Water — 4,543 liters (1,200 gal)/day

Toilet — 1 toilet, 1 lavatory

Electrical service and telephone required

### Family Picnicking

2 toilet buildings

Water — 280 persons @ 28 liters (7.5 gal)/person;  
7,840 liters (2,100 gal.)

Toilets — (men) 2 toilets, 2 urinals, 2 lavatories  
(women) 3 toilets, 2 lavatories

### Group Day Camp

Water — existing closed well

128 persons @ 28 liters (7.5 gal)/person, 3,584 liters  
(960 gal)/day

Toilets — existing pit toilet

1 additional pit toilet

Electrical service existing

### Family Wilderness Camp

Water — 40 persons @ 19 liters (5 gal)/person, 760 liters  
(200 gal)/day

Toilets — existing pit toilet

### Group Tent Camp

Water — 80 persons @ 19 liters (5 gal)/person, 1,520 liters  
(400 gal)/day

Toilets — 2 pit toilets



Eno Station Access Area

Water — 1 drinking fountain

Toilets — 1 pit toilet

Electrical service and telephone required

Cabe's Mill Access Area

Water — 1 drinking fountain

Toilets — 1 pit toilet

Cole Mill Road Access Area

Information Station

Electrical service and telephone required

Ranger Residence (existing building)

water, toilets, electrical and telephone existing

Family Picnicking

Water — 1 drinking fountain

Toilets — 2 pit toilets

Group Picnicking

Water — 1 drinking fountain

Toilets — 1 pit toilet

Family Wilderness Camp

Water — 40 persons @ 19 liters (5 gal)/person, 760 liters  
(200 gal)/day

Toilets — 1 pit toilet

Pump Station Access Area

Family Picnicking

Water — 1 drinking fountain

Toilets — 1 pit toilet

Group Picnicking

Water — 1 drinking fountain

Toilets — 1 pit toilet



CABLE/RAFT CROSSING, Brenda Williams

## STAFFING

Phase I	Ranger II*	permanent
	Ranger I*	permanent
	Naturalist*	seasonal (3 mo.)
	Attendant*	seasonal (3 mo.)
	Labor Support*	hourly
Phase II	Superintendent	permanent
	Ranger-Naturalist	permanent
	General Utility	
	Technician	permanent
	Typist-Clerk	seasonal (6 mo.)
	Recreator	seasonal (3 mo.)

\*Existing

## RIVER MANAGEMENT

Non-exploitive use of a park's resources is always the goal of State Park planning and development. Proposals for recreation uses along the Eno River are more limited than usual, however, partly because of the close proximity of two other projects which will provide numerous intensive recreation opportunities, and partly because of the inherently fragile nature of the riverine area. The plans for the park were developed only after careful analysis of the area's natural systems; therefore,

maximum protection has been provided for them within the park.

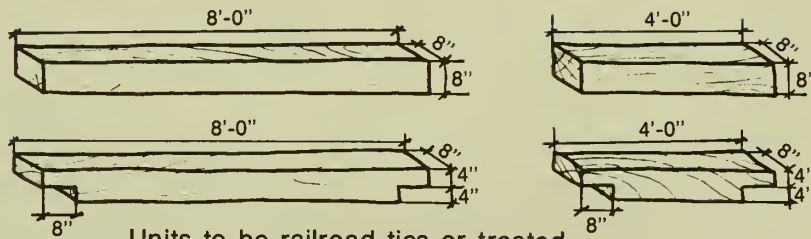
There is a need for additional protection of the river which exceeds the proposed boundaries of the state park and, therefore, its jurisdiction. Recreational activity within the park as well as survival of a healthy river system will be affected by water quantity and quality. Rate of flow naturally fluctuates seasonally, but a study is needed to assure that water draw-off for private and public concerns does not jeopardize the health of the river. Increasing development in the area is placing additional pressure on the river and is changing traditional land uses within the watershed. A careful study of the entire watershed is needed to assess what impact these changes are having on water quality and to develop recommendations for future management of the corridor.

The State, Durham County, Wake County, and the Federal Government all have made commitments for recreation development along the Eno-Neuse River corridors. Action should be taken to assure that adequate protection is provided for the river from its origin in Orange County to its incorporation in the Falls project. This will not only result in protection of previous public investments but it will protect a healthy, functioning natural system and aid in its preservation for enjoyment by future generations.



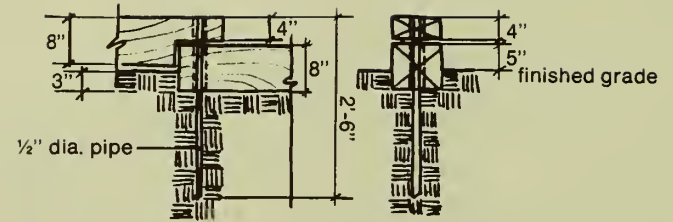


# PARKING AREA EDGES

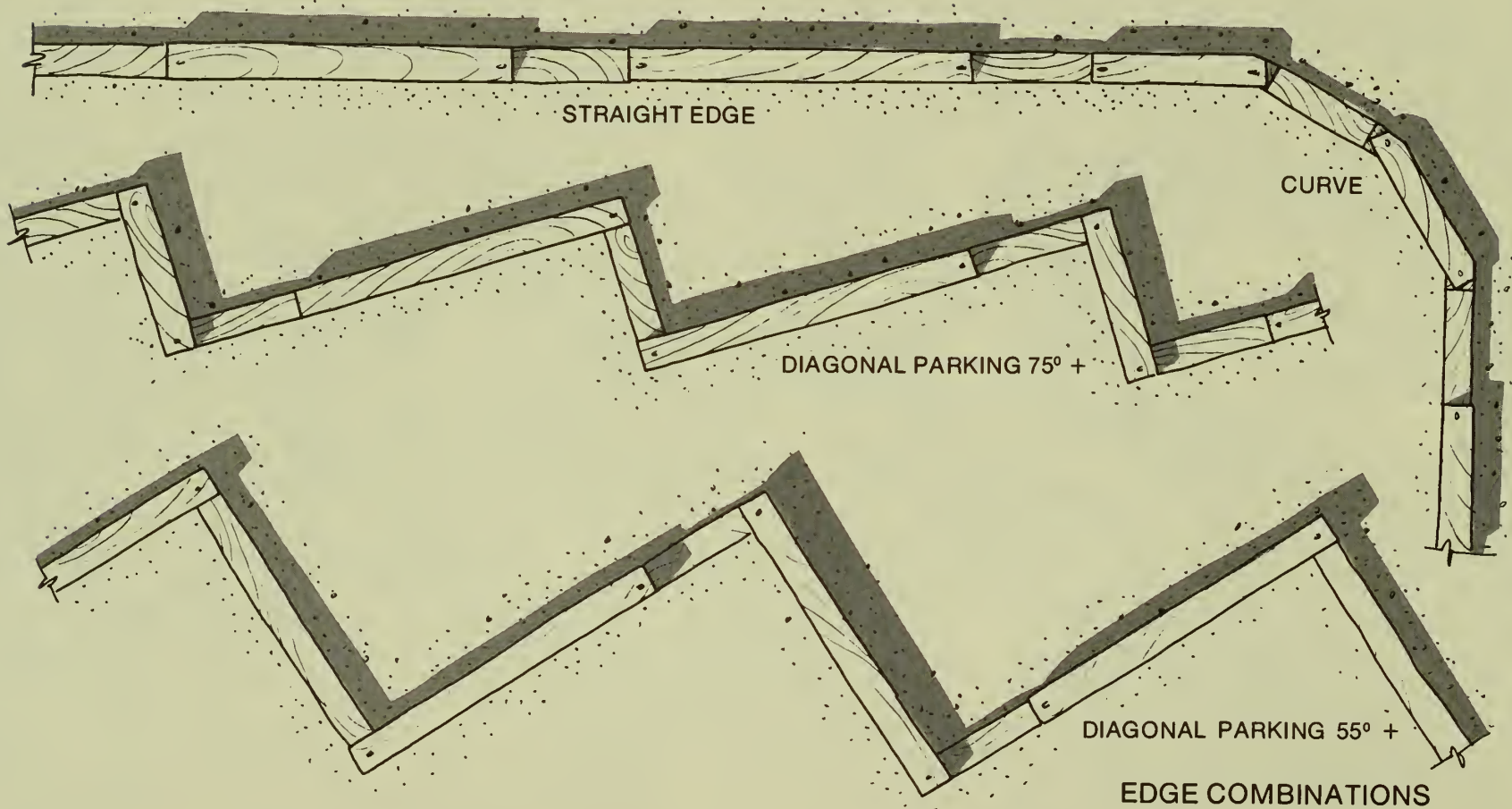


Units to be railroad ties or treated wood as specified for each project.

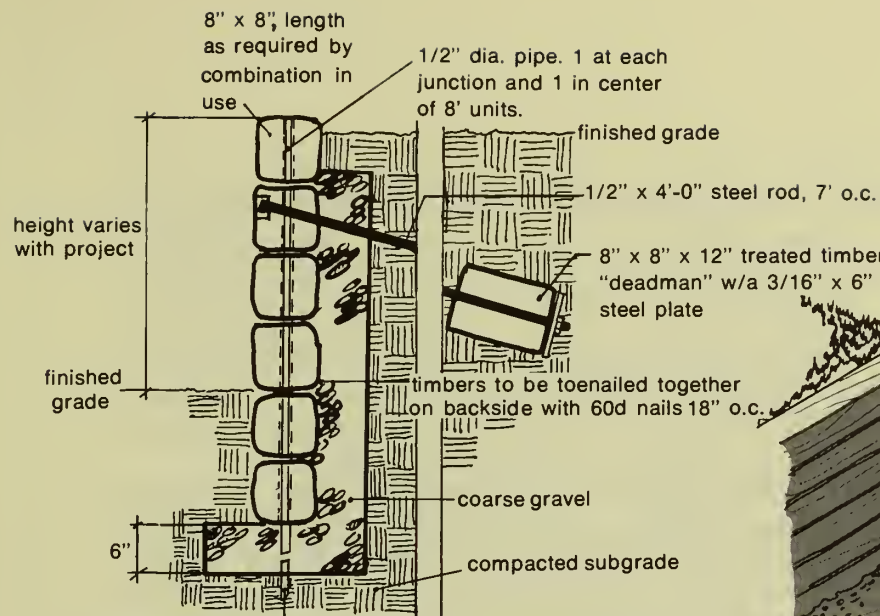
UNITS



JUNCTION

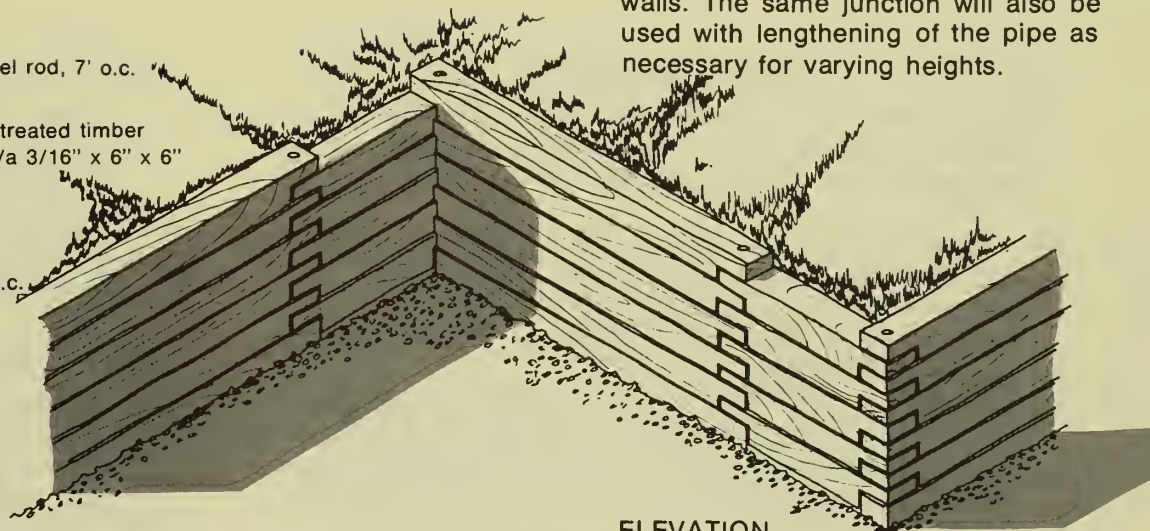






1/2" dia. pipe thru 2 timbers and sunk a minimum of 3' into subgrade.

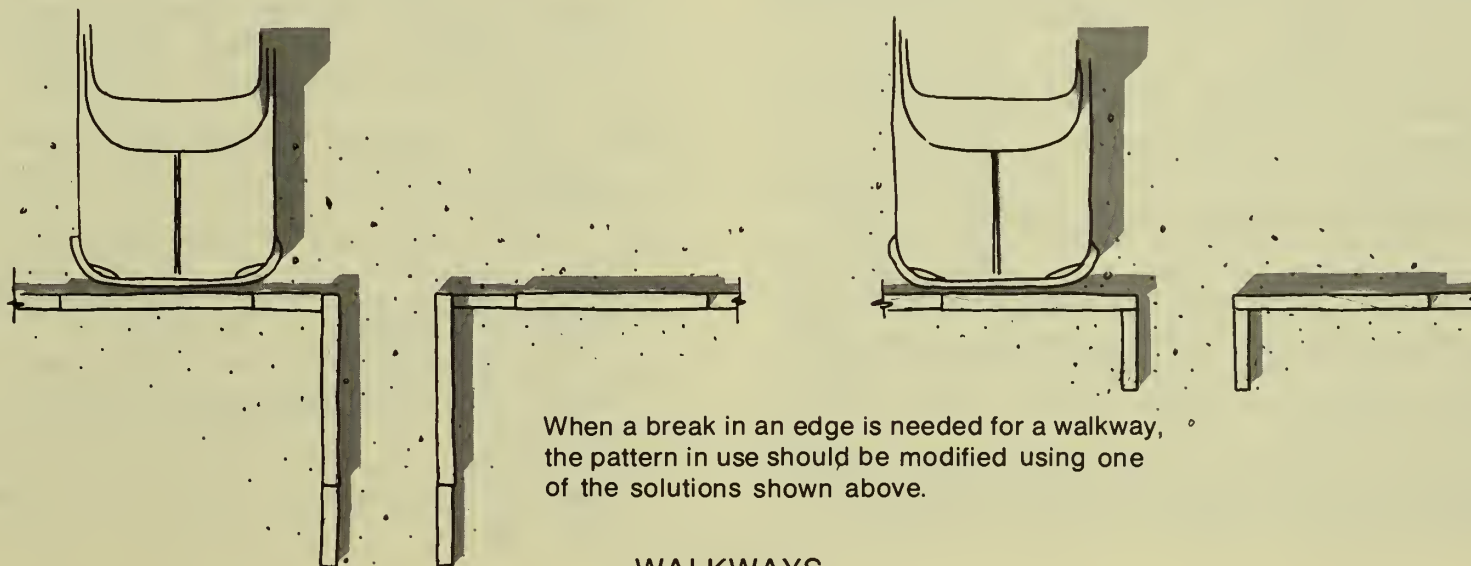
CROSS SECTION



ELEVATION

The same combination of units shown for the edges will be used for retaining walls. The same junction will also be used with lengthening of the pipe as necessary for varying heights.

RETAINING WALL



When a break in an edge is needed for a walkway, the pattern in use should be modified using one of the solutions shown above.

WALKWAYS

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A series of interviews were held with individuals having a specialized knowledge of resources and conditions relating to the Eno River area. The following is a listing of interviews which proved particularly important to the Master Plan study:

Mr. Donald N. Cox, Eno River Association, May 12, 1975.

Mr. Alexander T. Davison, Orange County Task Force, January 23, 1976.

Mr. Ervin Dobson, Orange County Planning Department, July 16 & 21, 1975.

Mr. Alex Gilleskie, Durham Recreational Department, July 16, 1975.

Dr. David Lang, Orange County Task Force, February 27, 1976.

Mrs. Margaret Nygard, Eno River Association, June 2, 1975.

Mr. B.B. Olive, Orange County Task Force, February 27, 1976.

Ms. Phoebe Rader, Duke University, January 20, 1976.

Mr. Pearson Stewart, Region J COG, August 19, 1975.

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